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ABSTRACT

A sample of 30 male and 124 female prospective teachers were given a battery of inventories prior to teacher training. Included in this battery was a 300-item Educational Opinion Inventory (EOI). On the day immediately following the administration of each inventory, each subject taught a 40-minute lesson to 20 to 30 secondary school students. After the lessons, the students were asked to rate each subject on a 20-item Pupil Inventory that elicited responses from the students concerning the teacher-student rapport developed over the 40-minute lesson. Between 18 and 21 months after they completed the teacher education program, 150 subjects in the original samples were contacted. Of these, 84 were teaching full-time in a secondary school, and 66 had never entered or left the teaching profession. The EOI responses of these two groups were analyzed to find items that differentiated them. The study indicated that potential teachers approach teacher training with educational attitudes that markedly affect their relationships with students and their probability of remaining in teaching. Students are able to infer something related to these attitudes, i.e., expected degree of rapport, from their first impression of the teacher with no knowledge of the teacher's behavior or beliefs. Recommendations indicate the need for further study to determine the potential effectiveness of the scales for selecting and guiding the training of future teachers. Appendixes, tables, and a 59-item bibliography are included. (Author/MJM)

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Technical Report No. 28

TEACHERS' ATTITUDES: THEIR EMPIRICAL RELATIONSHIP TO RAPPORT WITH STUDENTS AND SURVIVAL IN THE PROFESSION

Richard Michael Krasno

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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INTRODUCTORY STATEMENT

The Center's mission is to improve teaching in American schools. Too many teachers still employ a didactic style aimed at filling passive students with facts. The teacher's environment often prevents him from changing his style, and may indeed drive him out of the profession. And the children of the poor typically suffer from the worst teaching.

The Center uses the resources of the behavioral sciences in pursuing its objectives. Drawing primarily upon psychology and sociology, but also upon other behavioral science disciplines, the Center has formulated programs of research, development, demonstration, and dissemination in three areas. Program 1, Teaching Effectiveness, is now developing a Model Teacher Training System that can be used to train both beginning and experienced teachers in effective teaching skills. Program 2, The Environment for Teaching, is developing models of school organization and ways of evaluating teachers that will encourage teachers to become more professional and more committed. Program 3, Teaching Students from Low-Income Areas, is developing materials and procedures for motivating both students and teachers in low-income schools.

This report, based on data from the Intern Data Bank of the Program on Teaching Effectiveness, contributes to the understanding of attitudinal correlates of teacher-student rapport and longevity in teaching. It reproduces a doctoral dissertation, entitled "Initial Rapport and Survival in Teaching as a Function of the Educational Attitudes of Beginning Teachers," submitted to the School of Education, Stanford University, 1970.

ABSTRACT

A sample of 30 male and 124 female prospective teachers were given a battery of inventories prior to teacher training. Included in this battery was a 300-item Educational Opinion Inventory (EOI). On the day immediately following the administration of each inventory, each subject taught a 40-minute lesson to 20 to 30 secondary school students. After the lessons the students were asked to rate each subject on a 20-item Pupil Inventory that elicited responses from the students concerning the teacher-student rapport developed over the 40-minute lesson. From this rating each subject was assigned a rapport score based on the 11 items found through factor analysis to be highly loaded on the same factor. EOI responses of the highest and lowest 27% of the sample on teacher rapport scores were compared in order to find items that differentiated between the high- and low-rapport groups. A set of 62 items that differentiated the two groups on the basis of a chi-square test was designated as the R Scale. Inspection of R Scale items indicated that high-rapport subjects differed from low-rapport subjects in their greater flexibility, higher sensitivity to needs of individual students, and generally more progressive educational philosophy.

Between 18 and 21 months after they completed the teacher education program, 150 subjects in the original sample were contacted. Of these, 84 were teaching full-time in a secondary school, and 66 had never entered or left the teaching profession. The EOI responses of these two groups (designated as "survivors" and "nonsurvivors") were analyzed to find items that differentiated them. Sixty-six items were chosen and were designated as the S Scale. Inspection of S Scale items indicated that survivors entered teacher training with attitudes that were generally more progressive than those of nonsurvivors and with greater respect for the value of teaching and for the amount of work involved in teaching.

Discriminant analyses were performed using the predictor variables of (1) the California F-Scale, (2) the Kerlinger Scale of Educational Progressivism, (3) the Kerlinger Scale of Educational Traditionalism, (4) the Graduate Record Examination Verbal Test, (5) the Graduate Record Examination Quantitative Test. Results of the discriminant analyses indicated that these tests neither singly nor in combination could significantly or efficiently discriminate either high- from low-rapport students or survivors from nonsurvivors.

The study indicated that potential teachers approach teacher training with educational attitudes that markedly affect their relationships with students and their probability of remaining in teaching. In addition, students are able to infer something related to these attitudes, i.e., expected degree of rapport, from their very first impression of the teacher with no knowledge of the teacher's behavior or beliefs.

It is suggested that at this stage of their development the R and S Scales should be used only as research tools, and that further validation studies should be carried out to determine the potential effectiveness of the scales for selecting and guiding the training of future teachers.

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CHAPTER I

THE PROBLEM

The purpose of this study was to examine two broad areas: (1) the prediction of initial pre-training effectiveness of beginning teachers as measured by teacher-student rapport, and (2) the prediction of beginning teachers' career patterns. This study adds to the substantive research which has concerned itself with the significance of individual differences among prospective teachers for teacher training and selection. The practical applications of such research have been few. It has been tacitly assumed that persons motivated to undertake a formal program to become teachers are essentially homogeneous in their baseline performance on variables relevant to characteristics of effective teaching and longevity in the profession. Teacher education curricula across the country are shamefully uniform and insensitive to their own pedagogical doctrine as they continue, for example, to rely very heavily upon the lecture to classes of 100 or more prospective teachers at once on the crucial significance of individual differences.

Research in this area has been particularly difficult for two major reasons. First, the practical exigencies of teacher education programs render it nearly impossible to obtain a sample of teaching behavior from each applicant to use for selection and diagnosis. Second, teacher trainers would not know what to do if

they did in fact obtain a "pre-training" description of applicants. Research on differential training techniques is not yet ready to provide alternative modes of instruction based upon differential characteristics. Thus, two lines of research must proceed in parallel; one aimed to define relevant differential characteristics of potential teachers that may ultimately guide in selection and training, and the other to develop reasonable and practical training alternatives. This study dealt with the former.

The practical difficulties in predicting career patterns are also obvious. In an era of substantially shifting demands for teachers, it is important to determine the characteristics of persons trained to be teachers that differentiate between those who eventually do or do not enter and remain in the profession. According to a research report published by the National Education Association (1969), only 64.3% of all prospective secondary school teachers actually enter the classroom immediately following graduation. It is clearly inefficient to develop a teacher education program, however effective by any criterion, that prepares substantial numbers of persons who never enter the classroom or who do so for only a very short time. Thus, a second major purpose of this dissertation was to define a set of pre-training teacher characteristics which will assist in the prediction and analysis of career patterns of beginning teachers.

A Paradigm for Research on Teacher Effectiveness

For many years research on teacher effectiveness has proceeded in an organizational vacuum. Given the plethora of studies

on teacher effectiveness and the relatively meager payoff up to now, it is important to carry out coordinated and coherent research. Biddle (1964) suggested an organizational framework which may be used to guide research on teacher effectiveness into such coherence. The model is composed of seven sequential types of variables as shown in Figure 1. The first five kinds of variables, termed main-sequence variables, are (a) formative experiences, (b) teacher properties, (c) teacher behaviors, (d) immediate effects, and (e) long-term consequences. The remaining two kinds of variables, termed contextual variables, are (f) classroom situations and (g) school contexts. Biddle postulated that the five main-sequence variables have a cause-and-effect relationship:

> . . . formative experiences, teacher properties, teacher behaviors, immediate effects and long-term effects form a sequence such that each variable class in the sequence causes effects in the next variable class listed. The other two variables are postulated to be contexts for portions of the main sequence [p. 6].

The present study was concerned with the relationships between the variable classes of (b) teacher properties, as measured by educational attitudes held by prospective teachers; (d) immediate effects, as measured by pupil ratings of the effectiveness of prospective teachers and (e) long-term effects, as measured by teacher career patterns. Clearly it is not possible to isolate these three variable classes from the two remaining main-sequence classes. Attitudes as teacher properties are a function of the formative experiences of teachers and pupil ratings as immediate effects are a function of teacher behavior. This dissertation focused upon the three variable classes mentioned; however,

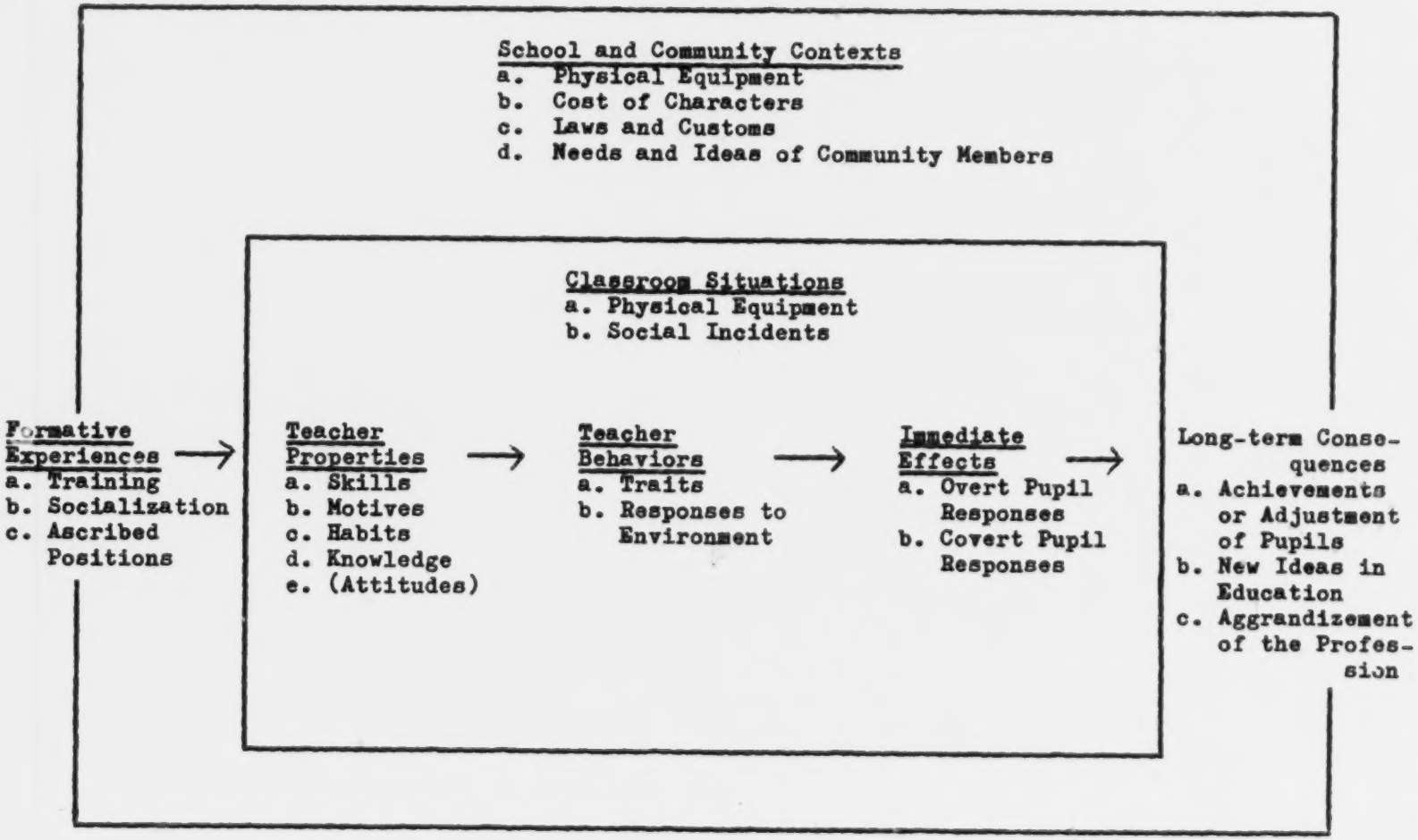

Fig. 1.--A Seven-Variable-Class Model for Teacher Effectiveness (Biddle, 1964)

using a research paradigm such as Biddle's suggests the ways in which this study may fit in with research using other variables to extend knowledge on teacher effectiveness and survival.

Organization of the Dissertation

The second chapter will provide in detail a description of the three variables which were the focus of this study: (a) the educational attitudes of prospective teachers prior to teacher training, (b) an aspect of the effectiveness of those prospective teachers, and (c) the initial career patterns of those teachers. Also included in Chapter II is a review of the literature relevant to each of these variables. Chapter III will describe the instruments and procedures used for gathering the data. Chapter IV will provide an analysis and discussion of the R scale which relates educational attitudes to teacher-student rapport. Chapter V will provide an analysis and discussion of the S-scale which relates educational attitudes to survival in the teaching profession. Chapter VI will provide an analysis and discussion of relevant supplementary data. Chapter VII will set forth the conclusions, and a summary of the dissertation.

CHAPTER II

THE VARIABLES

The purpose of this chapter is to define the important variables examined in this study and to review previous relevant research related to each of three variables. The first section will define teacher attitude as it is used in this study. Following this definition is a review of selected literature which is concerned with the development of instruments which measure teacher attitudes toward the educational process. The second section reviews relevant literature related to pupil's ratings of teachers. The final section reviews studies concerned with the career patterns of teachers.

Research on Teacher Attitudes

The concept of attitude has been termed the very heart of social psychology. G. W. Allport (1967) presented no less than sixteen definitions of the concept of attitude. These ranged from the very general statement of Baldwin (1901) that "[an attitude is] readiness for attention or action of a definite sort" (p. 88), to the more mechanistic and physiological definition of Warren (1922) that

> when a certain type of experience is constantly repeated, a change of set is brought about which affects many central neurons and tends to spread over other parts of the central nervous system. These changes in the general set of the

> central nervous system temper the process of reception. . . . In terms of the subjective mental life these general sets are called attitudes [p. 360].

For the purpose of this study a simple yet broad concept of attitude suggested by Remmers and Gage (1955) was used: "An attitude is a feeling for or against something" (p. 360). This definition contains three essential components: (1) an affective loading ("feeling"), (2) a vector term ("for or against"), and (3) a target ("something"). This definition is comprehensive in the sense that it indicates the incipient and preparatory qualities of attitudes which are common to other definitions yet it is not laden with any special theoretical bias. Following this definition, research on attitudes may focus upon (1) the intensity of the affective loading, (2) the directionality of the vector term, (3) the conceptualization of the target, or a combination of the three.

Previous research which has dealt specifically with teacher attitudes has focused on various combinations of the three components of Remmers and Gage's definition. A broad review of this research was presented by Stern (1963) and Getzels and Jackson (1963). This section will review that research on teacher attitudes which have teaching and the educational process as their target, or attitude object.

The Minnesota Teacher Attitude Inventory

By far the most widely used and studied instrument for the measurement of teacher attitudes toward the educational process is the Minnesota Teacher Attitude Inventory (MTAI). This instrument

was developed by Leeds (1946) in his doctoral dissertation and has been widely administered. The original purpose of the instrument was to distinguish empirically between (a) teachers who work with pupils "in a social atmosphere of cooperative endeavor, of intense interest in the work of the day, and with a feeling of security growing from a permissive atmosphere of freedom to act, and speak one's mind with mutual respect for the feelings, rights, and abilities of others," and (b) teachers who "tend to think in terms of [their] status, the correctness of the position [they] take on classroom matters, and the subject matter to be covered rather than in terms of what the pupil needs, feels, knows and can do" (Cook, Leeds, & Callis, 1951, p. 4). The items for the instrument were originally derived from 378 statements about teachers and children which were written in a five-choice Likert type scale. For the first validation of the instrument, 350 of the original statements were selected and expressed in both positive and negative wording. From this pool of 700 items, two forms of 350 items each were administered to elementary school teachers who were designated by their principals as being either superior (N=100) or inferior (N=100) in their ability to maintain "harmonious relations" with students in their classes. A chi square was then computed for each item. A final inventory of 164 items was established by selecting those items which differentiated significantly between the two groups of teachers and were clear, concise, and meaningful. Leeds then administered the inventory to a random sample of 100 teachers in grades four through six, and correlated

their scores with three criteria of teacher effectiveness: (1) principal's ratings of teachers, (2) Leeds' own ratings of the teachers with a scale based on one developed by Baxter (1938), and (3) student ratings of the teachers on a "My Teacher" questionnaire constructed by Leeds. Analysis of the data yielded significant correlations of .43, .49, and .45 between the inventory score and the three respective criteria. The multiple correlation between the inventory and the three ratings was .59. The corrected split-half reliability of the inventory was reported as .91.

It had thus been proposed with the establishment and subsequent validation of the MTAI that the instrument could be used to effectively predict behavioral correlates of teacher attitudes and ultimate success in the teaching profession. Leeds (1952) presented a "second validation study" of the MTAI using a further sample of 100 teachers in Grades 4-6, "unselected as to their relationships with pupils" (p. 399). The same three criteria--pupil ratings, principal ratings, and expert ratings--were used. The correlation between the inventory and the three criteria combined with equal weights was reported as .59, which is identical to the coefficient reported in the earlier study (Leeds, 1946). An interesting major discrepancy between the two studies occurred in the relationship between MTAI scores and pupil ratings. The 1946 study yielded a correlation of .45, the 1952 study, .31. Leeds explains that the difference might be due to the tendency of the second sample of pupils to rate their teachers significantly higher than the first sample. The corrected split-half reliability of the inventory for

the second sample was .93 as compared to .91 for the original sample. The most recent MTAI validation study published by Leeds (1969) used a sample of 100 experienced teachers in Grades 4-6, who had taken the MTAI twice before, at the beginning of teacher training and at graduation. Using the same three criteria for validation, the most recent sample (1967) yielded a correlation between the MTAI and combined equally weighted criteria of .51--a decrease from the two earlier reports yet still statistically significant at the .05 level. The 1969 study yielded other interesting discrepancies. The correlation between MTAI scores and pupil ratings dropped again from .45 in 1946 and .31 in 1951, to .24 in 1967. In addition, the correlation between principal's ratings and pupil's ratings of teacher's rapport with students dropped from a statistically significant .39 in 1946 and 1951, to a non-significant .11 in 1967. Concerning this result, Leeds states,

> One wonders just what is wrong when a principal insists that a certain teacher is extremely popular with pupils, and the pupils themselves express their great dislike for this teacher. The opposite also holds true when a teacher who, according to the principal is unpopular, is found to be well liked by the pupils. This is almost enough to bring one to the position of placing more faith in the instrument being tested than in the criteria [p. 53].

Table 1 illustrates the summary of correlations found using the 1946, 1951 and 1967 validation data.

Leeds' 1969 study also examined the use of the MTAI with student teachers and beginning teachers without teaching experience. Although many studies have used the instrument for the purpose of predicting the performance of beginning teachers, Leeds concludes that this use is unwarranted because the original scor-

TABLE 1

CORRELATIONS FOUND BETWEEN MTAI SCORES AND RATINGS BY PRINCIPALS, PUPILS, AND EXPERT FOR 100 EXPERIENCED TEACHERS IN THREE SEPARATE STUDIES[a]

Factors Correlated	Study		
	1946	1951	1967
MTAI scores vs. principals' ratings	.43	.46	.36
MTAI scores vs. pupils' ratings	.45	.31	.24
MTAI scores vs. expert's ratings	.49	.57	.55
MTAI scores vs. three validating criteria (combined equal weights)	.59	.59	.51
Expert's ratings vs. principals' ratings	.48	.43	.64
Expert's ratings vs. pupils' ratings	.33	.22	.34
Principals' ratings vs. pupils' ratings	.39	.39	.11[b]

Source: Leeds, 1969.

[a]All correlations are significant at the 5% level or better, with one exception.

[b]Not significant.

ing key for the inventory was constructed on the basis of experienced teacher responses. Leeds is currently in the process of devising a scoring key which may justify the use of the MTAI for beginning teachers.

Callis (1950) investigated the stability of the attitudes measured by the MTAI by administering the inventory to four groups of subjects: (1) a control group consisting of first-quarter juniors in a college of education--retested after one week to ten days; (2) juniors in a college of education, tested at the beginning of the first quarter and again after six months; (3) seniors in a college of education--tested at the beginning of the first

quarter and again after six months; and (4) experienced teachers, tested immediately after graduation and again after six months of teaching experience. All four groups showed a significant change upon retest. The control (1), junior (2), and senior (3), groups showed an increase toward more "desirable" attitudes, while the experienced group (4) showed a significant ($p < .01$) decrease in mean score. The junior group (2) showed the most dramatic increase. The author ascribed this shift to the experiences provided in the professional education courses taken by the subjects between the first and second test administration. The author also ascribed the decrease in mean score of the experienced teachers to their full-time teaching experience. Callis's study also revealed that the first six months of training in professional education brought about a significant change in the "desired" direction in 20% of the items, while the first six months of full-time teaching experience produced a significant change in the undesired direction in 11% of the items.

Day (1959) also examined the stability of MTAI scores over time. He administered the MTAI to 196 potential teachers immediately following their student teaching experience, and then readministered the inventory to 172 subjects in the original sample one year later. Of these 172 subjects, 109 were employed as full-time teachers and 37 were not teaching. The results indicated that the mean MTAI score of the teachers decreased a significant ($p < .01$) 20 points while the mean MTAI score of the non-teaching group decreased only 1.5 points. Cook, Leeds and Callis (1951)

reported a mean loss of only 3.94 points after six months of teaching experience. Medley, Mitzel and Rabinowitz (1959) administered the MTAI to 1323 potential teachers immediately following graduation from a teacher education program. Three years later they administered the MTAI again to those 931 subjects in the original sample who were still teaching. The authors report, "a significant decrease in average score over the three year interval" (p. 119), although the magnitude of the decrease was not reported. This decrease is ascribed to two factors: (1) a shift away from the extreme options ("strongly agree" and "strongly disagree") to less extreme options ("agree" and "disagree"), and (2) an increased emphasis upon discipline and academic standards. These stability studies indicate that educational attitudes as measured by the MTAI are affected by the teaching experience. The results may also suggest that teacher education institutions should provide a stronger "reality" component into their teacher training programs. As Day suggested in the study previously cited:

> It seems reasonable to assume that young teachers would become discouraged with teaching after experiencing the kind of abrupt change in attitude as evidenced by the above data. Unless the extreme point of view is adopted that young teachers should be "shocked" on first gaining experience as a means of culling out the unfit, it would seem more appropriate then to introduce some kind of initial contact with a teaching situation early in the program before the student has advanced very far with an unrealistic picture of what lies ahead in the classroom [p. 328].

Beyond the validation and stability studies the MTAI has been used widely to study the relationship between the MTAI and various teacher characteristics. Getzels and Jackson (1963) presented an extensive review of this literature published prior to

1960. However, since 1960 the frequency of publications using the MTAI have diminished somewhat. The Sixth Mental Measurements Yearbook (Buros, 1965) listed 56 studies using the MTAI in the three-year period 1958-60, and only 24 studies in the comparable period 1961-63. This may be due in part to the equivocal results obtained by investigators other than Leeds, Cook, and Callis. Scott and Brinkley (1960) found no relationship between the MTAI scores of either experienced or student teachers and the ability of teachers to establish "democratic personal relations" in the classroom as measured by student's ratings of teachers on the Classroom Personal Relations booklet devised by the authors. Day (1959) studied the predictive validity of the MTAI by correlating scores obtained on the inventory during intern teaching with principal's and supervisor's ratings of these teachers one year later. Day concluded, "It appears from the data collected that the predictive validity of the MTAI scores is quite low when the criterion is principal's rating of effectiveness (r=.28) and when the ratings are collected after one year of service or when the criterion is supervisor's ratings (r=.18)" (p. 37).

Rabinowitz and Rosenbaum (1958) correlated various test scores by teachers with classroom behavioral measures and pupil ratings after one year of teaching experience. The results indicated that no significant relationship existed between MTAI scores and teacher-pupil rapport as measured by pupil's ratings or classroom observations. The authors concluded that while the concurrent validity of the MTAI has been examined and reported, the

predictive validity of the instrument was without empirical support. It should be noted that the subjects were not yet experienced teachers when the MTAI was administered and thus the original scoring key may have been inappropriate as suggested by Leeds. Rabinowitz and Rosenbaum further reported that none of the nine teacher test variables which they used, singly or in combination, predicted subsequent teacher-pupil rapport as measured by pupil ratings. The tests, which were selected because research and theory suggested their usefulness as potential predictors further failed to correlate significantly with any of seven classroom observation measures. A particularly important point established in this study was the necessity to use predictive studies to establish predictive validity.

Certain teacher characteristics have been positively correlated with high MTAI scores, such as preference for teaching younger children, and femaleness (Beamer & Ledbetter, 1957); and relative infrequency in giving failing grades to students (Rocchio & Kearney, 1956). Geibink (1967) summarizes the evidence on MTAI as follows:

> Although this popular inventory has been used in many studies both as an independent and as a dependent variable and has been examined from a test construction point of view, its behavioral correlates remain limited to those used in the original standardization. At best, it seems that those teachers who score (high) on the MTAI can establish rapport with their students in a particularly defined way and do have some quality of likeability that can be sensed by observers. . . . [However], even though there may be a dimension which runs through the MTAI . . . the proportion of common variance is not large enough to offer much in the way of construct validity [p. 237].

Della Piana and Gage (1955) suggested that the validity of

the MTAI for predicting teacher-pupil rapport varied according to the values held by the pupils. This interactional approach suggested that effectiveness in leadership (teaching) is a function of both characteristics of the leader (teacher) and the needs and values of the followers (pupils). Given the general affective orientation of the MTAI, it follows that pupils with high affective needs would rate high MTAI-scoring teachers more positively. If the pupil has strong needs along other education-related dimensions a teacher who has characteristics which relate to the fulfillment of those particular needs would be rated more positively.

By differentiating pupils on the basis of their cognitive vs. affective needs and values and then having them rate teachers who had taken the MTAI, Della Piana and Gage were able to confirm their interactional hypothesis. That is, a positive correlation (r=.60) did exist between ratings by pupils who were determined to have had stronger affective values and teacher MTAI scores. However, for pupils with strong cognitive values the teacher's MTAI score made less difference (r=.05).

In summary, the preponderance of research concerning the MTAI indicates that the inventory has a moderate degree of validity for various purposes. The development of the instrument has, however, contributed substantial knowledge concerning the problems of teacher attitude measurement and the establishment of predictive, concurrent, and construct validity of attitude measures. The possibility that teacher behavior can be predicted from a constellation of responses to written educational opinion statements

is potentially very useful. Research using the MTAI has served to stimulate investigation into this relationship between teacher attitudes and teacher behavior.

Other Measures of Teacher's Attitudes toward the Educational Process

Ryans (1960) in his extensive research on teacher characteristics developed a number of "opinionnaires" which center upon the attitudes teachers hold toward (1) pupils, (2) democratic classroom activities, and (3) other personnel in the school. These inventories were made up of direct-inquiry items which were subsequently factor analyzed separately for elementary and secondary teachers. Ryans characterized the results as follows:

> The factorial representation of educational viewpoints that emerged was not clear-cut, and there seemed to be justification for considering teachers' educational beliefs from the standpoint of a single continuum, rather than several factors. This variable has been oversimplified perhaps by designation simply as an "academic content-standards versus flexible, permissive, pupil oriented" dimension (TCS characteristic B) [p. 78].

Kerlinger (1967) investigated the factorial nature of educational attitudes by devising a 46-item questionnaire and administering it to three samples: (1) 344 New York University graduate students of education and teachers in New York City, (2) 404 University of North Carolina graduate students of education and (3) 556 University of Houston graduate students of education and teachers in Texas. The results indicated two relatively uncorrelated factors that closely resembled Dewey's (1902) description of educational progressivism and traditionalism. The empirically orthogonal configuration of those factors "supports the

contention that educational attitudes consist of two relatively independent basic dimensions that can legitimately be called 'progressivism' and 'traditionalism' and it casts doubt on the notion that educational attitudes form a bipolar continuum" (p. 203). The most recent form of Kerlinger's test, Form ES-VII, consists of 30 Likert type items which yield two scores: an A score (educational progressivism), and a B score (educational traditionalism).

Clark (1970) found a significant negative correlation between the A score (progressivism) on the Kerlinger ES-VII and authoritarianism as measured by the California F Scale. Using beginning teaching interns as his sample, Clark further investigated the relationship between progressivism, authoritarianism, and the teachers use of inquiry in the classroom. Although no statistically significant relationship was found between the use of inquiry and the two attitude variables, there was a positive relationship between progressivism and inquiry. The was also negative relationship between authoritarianism and the teachers use of inquiry after one quarter of teacher training.

Padgett (1969) administered the MTAI and the Kerlinger ES-VII to 103 prospective teachers in a large state university. Padgett did not report correlation coefficients but stated that prospective teachers with high MTAI scores tended to score high on the progressivism scale of the ES-VII while low MTAI scores correlated with high scores on the traditionalism scale.

Wehling and Charters (1969) investigated teacher belief patterns by administering a series of questionnaires including the

Kerlinger ES-VII and parts of the MTAI to 966 teachers and student teachers in the Midwest over a three-year period. A factor analysis yielded "eight distinct and relatively independent dimension of teacher belief [which] emerged from the several analyses with sufficient regularity to suggest that they are not idiosyncratic to particular populations or methods of study" (p. 7). The eight dimensions were (a) subject-matter emphasis, (b) personal adjustment ideology, (c) student autonomy vs. teacher direction, (d) emotional disengagement, (e) consideration of student viewpoint, (f) classroom order, (g) student challenge, and (h) integrative learning. The first two dimensions appeared to be strongly related to teacher's views concerning the goals of the educational process. The remaining six dimensions represented "instrumental beliefs" which are related to the necessary prerequisites and order of the instructional process. Wehling and Charters supported Kerlinger's contention that teacher's beliefs are in large part uni-polar. That is, the relative presence of a belief is significant but no presumptions can be made about a teacher's beliefs in the absence of a particular belief dimension. Thus, educational beliefs of teacher appear to be many-faceted, complex, and not necessarily antithetical. Wehling and Charters' research is important because it suggests a broad theoretical framework for directing and guiding further empirical research in the area of teacher attitudes.

Research on Pupil Ratings

The teacher effectiveness criterion used in this study was

derived from ratings of teachers by students. This section will review a number of studies which have examined the reliability and validity of pupil ratings of teachers.

Remmers (1963) reviewed a large number of pupil rating studies and from this review he made a series of generalizations concerning pupil ratings of teachers. In summary those generalizations which are most relevant to this study were as follows:

1. The reliability of ratings of teachers by students is comparable to the reliability of better educational tests. The reliability of ratings increases as the numbers of raters increases (Remmers, 1960).

2. The sex of the raters and the sex of the teacher have little or no bearing on student ratings of teachers (Remmers, 1929).

3. Grades received by students and/or the difficulty of the course do not appreciably affect student ratings of teachers (Remmers, 1928).

4. Teachers with more than eight years of teaching experience tend to be rated higher than teachers with less than five years of teaching experience (Remmers, 1929).

5. Student ratings of teacher competence are not appreciably related to ratings of teacher popularity in extra-curricular activities (Remmers, 1960).

6. Although students feel more positively than teachers about the usefulness of student ratings, teachers are more likely than students to notice improvement in their teaching as a result of student ratings (Remmers, 1960).

Although Remmers' review only considered research completed prior to 1961, more recent research tends to confirm his generalizations.

Bryan (1966) studied the stability of the teacher's image as judged by students. He had seventh-grade pupils rate 34 teachers along 9 teacher competency dimensions. He then had twelfth-

grade students rate these teachers, under whom they had studied five years previously, along these same dimensions. The results indicated that only four of the teachers received significantly higher ratings from the seventh-grade students. Of these four, one had gained on one dimension, one on two dimensions, and two on three dimensions. Unfortunately, Bryan does not report how many, if any, of the teachers received lower ratings from the seventh-grade students. However, he does suggest that student ratings of teachers remain quite stable over time. Druckers and Remmers (1951) also found that alumni after 10 years rated former instructors comparably to current students of those instructors.

Veldman and Peck (1969) examined the influence of five different dimensions of assessment context on pupil evaluations of student teachers. The five assessment context variables included the following: (a) teacher ability (derived from grade in student teaching course), (b) grade level of the class taught (7-12), (c) subject matter area taught, (d) social class level of the school, and (e) sex of the student teacher. The dependent variables were factor scores from a Pupil Observation Survey (POSR). These factor scores included: (1) friendly and cheerful, (2) knowledgeable and poised, (3) lively and interesting, (4) firm control, (5) non-directive, and (6) general evaluation. The data were collected from 609 student teachers. The major results of the study indicated that the POSR variables were not affected by the grade level of the class or the socio-economic level of the school. However, the data indicated that in this study the subject matter taught

did bias POSR scores, so that differences occurred which were attributable to more than true differences among teachers of various subjects. This inference was based upon a comparison of the factor scores between subject areas. For example, the derived expected value for physical education teachers on factor 3 (lively and interesting) was almost one standard deviation higher than that for teachers in all other subject areas. In contrast, the derived expected value for foreign language teachers on factor 5 (nondirectiveness) was almost one standard deviation below the expected value on that factor for teachers in other subject areas. This suggests a subject area related norm or frame of reference whereby student raters expect, for example, physical education teachers to be more "lively" than other teachers, and foreign language teacher to be more "directive" than other teachers. The author concluded that pupil ratings are valuable since they average a large number of individual biases which often yield spurious results when "trained observers" are used as raters. Research should, however, be cognizant of the potential sources of systematic bias in pupil evaluations. The authors suggested further that research concerning the effects of various student characteristics upon student evaluation of teachers should proceed in parallel with research on the effects of teacher characteristics upon teacher evaluation.

A number of studies have attempted to delineate the dimensions upon which students rate teachers. The most typical technique used in research of this type is the application of factor analytic techniques to student rating scales. Bendig (1954) factor

analyzed ratings by students of college introductory psychology instructors. This study employed the Purdue Rating Scale for Instruction (PRSI). Three factors were found to account for 80% of the variance: a general factor (halo), and two additional factors labelled "instructional competence," and "instructor empathy." Randhawa and Savage (1970) reported a study in which 1800 students rated 59 instructors using a 30-item rating scale covering various aspects of instructor effectiveness. The principal factors extracted were: (1) empathy, (2) organization, (3) supplemental reading, (4) course complexity, (5) approachability, (6) evaluation, (7) redundancy, and (8) fairness. Beck (1967) factor analyzed the responses to a 150-item teacher effectiveness questionnaire of 2108 sixth-grade pupils on the perceived effectiveness of their 75 teachers. The results of the analysis suggested five dimensions of teacher merit as perceived by sixth-grade pupils: (1) affective merit, (2) cognitive merit, (3) disciplinary merit, (4) motivational merit, and (5) innovative merit. Beck concluded that the perception of teacher effectiveness by students varies across grade levels. That is, elementary school pupils perceive teacher competence differently than secondary school students. Therefore, research must investigate the differential nature of perceived teacher effectiveness and instrumentation must be developed from this research.

In summary, research has indicated that pupil ratings are one reliable, stable, and relatively inexpensive approach to the assessment of teacher effectiveness. They are not without their

pitfalls but, when considered as one facet of a multi-dimensional model, they are quite useful. Regarding the validity of student ratings of teachers Bryan (1959) has written:

> Are reliable student reactions a valid measure of student opinion? To this question there can only be an affirmative answer. If students agree they like a teacher, the verdict must be accepted because there is no higher authority to which appeal can be made. If supervisors disagree, we can conclude only that the teacher is liked by students and disliked by supervisors [p. 15].

Research on Career Patterns

Research concerning the career patterns of teachers has been based for many years upon speculation and large-scale generalization from relatively small samples. Charters (1963) stated, "the career patterns of American teachers are almost exclusively matters of common knowledge rather than of accurate, statistical description" (p. 752).

The descriptions of career patterns have tended to use the categories of (a) vertical mobility, through the school system hierarchy, and (b) horizontal mobility, from one school to another, as their major dimensions. With respect to vertical mobility, the "successful" teacher tends to advance from the classroom to department chairmanship, principalship, and superintendency (Morris, 1957). Another type of vertical mobility described by Havighurst and Neugarten (1957) proceeds from lower elementary grades through higher secondary grades. Horizontal mobility most often occurs as teachers move from smaller, less wealthy and less prestigious districts, toward large cities, higher salaried and more prestigious districts. Morris (1957) in a review of the career pattern liter-

ature through 1957 suggested some of the following characteristics of teacher mobility:

1. Only two-thirds of all persons trained in education ever enter the field.
2. Only 40% of those persons who were trained to be teachers were actually teaching at any time.
3. The teaching profession retains women who are trained to be teachers as well as any other women's occupation but does not hold male teachers.
4. Teaching staffs in small school districts are more mobile than those in large districts.
5. Younger teachers shift positions more frequently than older teachers.
6. Some teacher mobility out of the profession is due to conditions (e.g., salary, prestige, etc.) other than dissatisfaction with the teaching activity.
7. Much mobility of teachers involves geographic changes.
8. Most mobility for women teachers is horizontal.
9. Male teachers are seven to ten times more likely than women to obtain an administrative position in the school system.
10. The percentage of single woman teachers decreases over time from 70% to 40%.

Charters has published a substantial number of studies dealing with the methodology of career pattern research. The most recent study (Charters, 1970) applies an actuarial model to the problem of factors affecting teacher survival in the profession. Charters analyzed data collected from 799 male and 1265 female teachers who were new employees of the Oregon public school districts in the academic year 1962-63 and followed up in fall 1966. Charters dichotomized the possible causes for leaving the teaching profession as either individual attributes or organizational attri-

butes. Analysis of the data indicated that:

1. Female teachers who were older at time of first employment are more likely to remain in teaching, but that this is not true for males.

2. When age and sex are held constant, neither teaching level nor prior teaching experience in other districts is related to survival.

3. The size of the school district is related to survival for male teachers but not for female teachers. That is, males in smaller school systems were less likely to leave than males in large districts. This relationship was not evident for females.

4. Neither the type of district (unified, secondary, or elementary) nor the wealth of the district were related to survival in teaching.

Charters concluded, "Thus sex, age (for females), and district size (for males) stand out as the prime determinants of the length of time a teacher can be expected to remain in a school district once he is employed" (p. 15). Although the statistical techniques Charters employed represent a methodological advance in empirical research in the area of career patterns much work is needed to further define characteristics which relate not only to survival within a particular school district but also survival in the teaching profession.

By far the most extensive and detailed description of the supply and demand characteristics of the teaching profession in the United States is the research report entitled Teacher Supply and Demand in Public Schools (National Education Association, 1969). This report is based upon survey responses from state departments of education and the nation's 79 largest school systems. Of particular interest to this dissertation is the fact that in 1967

over 35% of the persons trained to be secondary school teachers did not enter the profession. Further, of 42 states responding to questions concerning the demand for qualified teachers in 1968, five states reported a substantial shortage of applicants; 17 states reported some shortage of applicants; 19 states reported a shortage of applicants in some subject areas and an excess in others; and only one state reported sufficient applicants to fill positions.

The impetus for increased teacher demand in some areas appear to stem from four major sources: increased enrollment, new positions resulting from federal legislation, added curricular offerings, and a reduction in class size. However, there have been recent reports (Newsweek, 1970) of a large-scale teacher surplus in the United States. While it is true that a number of qualified teachers are having difficulty finding teaching positions, it appears that this surplus is confined to certain geographic regions, subject matter areas, and grade levels. The surplus notion is further based upon a static school staffing model which does not consider expansion of the curriculum, reduced class size, or inclusion of part-time teachers in the teaching force. Thus, rather than a teacher surplus it appears that there is an employment deficit. That is, increased financial pressures upon the schools preclude the investigation of how to use qualified personnel more effectively and creatively. The fact that more people are entering the teaching profession allows for the possibility that teacher education programs and schools may now

begin to attend to more than the mass production of certified personnel to fill predetermined slots in schools. Research concerned with the career patterns of teachers may establish parameters within which institutions will be able to examine new models of training teachers and staffing schools.

CHAPTER III

PROCEDURES AND INSTRUMENTS

Chapter III will describe in detail (1) the procedures used for collecting data, and (2) the instruments used in collecting the data for this study. The first section includes a detailed description of the sample. The second section includes the techniques used in the development of each instrument.

Procedures

The general design of the study was to obtain (a) measures of educational attitudes and (b) a sample of teaching behavior of prospective teachers prior to any systematic exposure to teacher education and then to determine (c) the career pattern for each person eighteen months after successful completion of the teacher education program.

The sample included the entire class of 163 students who entered the Stanford Secondary Teacher Education Program in June 1967. These teacher trainees, or "interns" as they are commonly referred to, held a baccalaureate degree in an academic subject and had had no formal exposure to teacher education. The sample included 38 males and 125 females, divided as follows among subject areas: social studies, 58; English, 37; science, 14; mathematics, 9; music, 6; art, 6; foreign language, 28; and physical

education, 5. Table 2 indicates the sex and subject area breakdown of the sample.

TABLE 2

COMPOSITION OF INITIAL SAMPLE BY SEX AND SUBJECT MATTER FIELD

Subject Matter Field	Male	Female	Total
Art	1	5	6
English	4	33	37
Mathematics	2	7	9
Music	1	5	6
Physical Education .	5	0	5
Foreign Language . .	2	26	28
Science	5	9	14
Social Studies . . .	18	40	58
Total . . .	38	125	163

The schedule of the Stanford Secondary Teacher Education Program is comprised of an intensive summer training program beginning in June which includes course work and participation in the microteaching clinic, followed by an academic year of half-time teaching in a secondary school in the Palo Alto area and academic and professional courses at Stanford. The intern typically has major responsibility for teaching two or three courses in the cooperating high school. The program terminates the following June with the award of a Master of Education degree and a California State teaching credential.

The data used in this study were collected as part of the Intern Data Bank Project of the Stanford Center for Research and

Development in Teaching. The data collection procedures for the Intern Data Bank Project will be described fully, although only a portion of the data is used in this study.

During the first day of the program, the interns were administered the following battery of inventories:

1. The Educational Opinion Inventory Form Bx--a 300-item inventory, developed by N. L. Gage and Morris Weitman, which measures attitudes related to teaching and the educational process. This inventory served as the basic attitudinal measure for this study and will be described in detail later in this chapter.

2. The California F Scale--a 30-item inventory, written by Adorno et al. (1950), which estimates the authoritarian dimension of the subject's personality.

3. The Kerlinger Attitude Scale ES-VII--a 30-item inventory measuring educational progressivism and educational traditionalism.

4. The One-Word Sentence Completion Test for Teachers--a 90-item projective test of teacher personality developed by Robert Peck and Donald Veldman.

5. The Directed Imagination Test--a short thematic apperception test for teachers, developed by Robert Peck and Oliver Brown.

6. The Simile Interpretations Test and the Topics Test--two tests from the Kit of Reference Tests for Cognitive Factors (French, Ekstrom and Price, 1963), which estimate ideational fluency.

Verbal and Quantitative scores on the aptitude portion of the Graduate Record Examination were also available for each subject. On the two days immediately following the administration of the test battery, each subject was instructed to prepare a 45-minute lesson in his own teaching field. Thirty of the subjects in the social studies area and 15 in the English area were provided with curricular material prepared by supervising instructors at Stanford. These "pre-set" lessons were used by a portion of the subjects in order to hold constant variables directly related to lesson content so that variability among pre-set lessons in content and outcomes would be more directly attributable to role and personality factors of the teacher. The remainder of the subjects used curricular material of their own choosing within their subject area.

Over 450 students from the Palo Alto, California, junior and senior high schools were hired to participate as pupils in the Intern Data Bank Project. All these pupils were administered the Wide-Range Vocabulary Test and the Necessary Arithmetic Operations Test (French, Ekstrom and Price, 1963), for use as aptitude measures. The students were then trained to use two teacher rating protocols--the Stanford Teacher Competence Appraisal Guide and the Pupil Inventory. The Pupil Inventory was used as the measure of teacher effectiveness in this study and will be described in detail in this chapter. The pupils were randomly assigned approximately 25 to a class and were exposed to eight to ten teachers over a two-day period. Schedules were arranged so that no class

of students received more than one "pre-set" lesson from each English and social studies intern teacher. After each lesson, the pupils rated the intern teachers using the Pupil Inventory and the Stanford Teacher Competence Apprisal Guide. In addition those pupils who received a "pre-set" lesson took a short achievement test on the material to obtain a "microcriterion" of teacher effectiveness.

This total procedure, except for some of the testing of interns and pupils, was carried out three times: in June 1967, at the beginning of the program; in August 1967, after the intensive summer training program but before intern teaching; and in May 1968, after the completion of the training program and one academic year of intern teaching. This study used data from the first session in June 1967, the second session in August 1967, and from a follow-up interview administered from December 1969 to April 1970.

Instruments

The Educational Opinion Inventory (EOI)

The Educational Opinion Inventory, Form Bx (shown in Appendix I), was used in this study to measure attitudes of potential teachers toward educational issues. The EOI was developed in 1957 for the purpose of obtaining teacher opinions presumably relevant to their ability to help students to achieve educational objectives in the "cognitive domain," as defined by Bloom et al. (1956). For each opinion statement, the respondent selects one of five

alternatives: (a) strongly agree, (b) agree, (c) undecided or uncertain, (d) disagree, (e) strongly disagree. The items deal not with factual matters but with opinions.

In a dissertation directed by N. L. Gage, Gupta (1960) used the EOI to examine the cognitive merit of teachers. Following Della Piana and Gage (1955), she hypothesized that a teacher's rapport with students was a function of the interaction between teacher merit (affective and cognitive) and student values. That is, a teacher with highly developed affective skills might not relate effectively to a pupil whose values with respect to teachers were largely cognitive. Gupta considered the MTAI to be relevant primarily to the teacher's affective merit and thus of limited utility. Therefore she had students rate teachers along dimensions of both cognitive and affective merit. These ratings were factor analyzed and each teacher was given a factor score on that factor which was considered to be the best measure of cognitive merit.

The responses on the EOI were then correlated with the cognitive merit scores. Analyses yielded 60 EOI items which correlated with the cognitive merit criterion. Gupta characterized high cognitive merit teachers thusly:

> [They] subscribe to generally accepted principles, methods and techniques of teaching. However, they also appear to believe in the importance of teacher-pupil relationships and in the importance of developing motivation and interest in the pupil. Their attitudes regarding the philosophy and goals of education are broad, and not narrowly related to subject matter or content. It appears that a teacher may be high in cognitive merit without necessarily being narrow, in a philosophy of education, and without being neglectful of the affective or personal factors in the teaching-learning situations [pp. 71-72].

Further findings of Gupta's study indicated that teachers with more teaching experience and more education beyond high school scored significantly higher on cognitive merit as measured by the discriminating EOI items. No relationship was found between teacher's cognitive merit and subject matter area taught. Contrary to Gupta's expectations, teachers of primary grades scored significantly higher on cognitive merit than did teachers of elementary grades, high school, or junior college ($p < .01$). Elementary grade teachers scored lower on cognitive merit than primary teachers but higher than high school or junior college teachers.

A second study which used the EOI was carried out under the direction of N. L. Gage by Keene (1961). She attempted to further investigate the relationship between cognitive and affective merit by correlating the EOI and the MTAI. A second purpose of Keene's study was to investigate the relationship between EOI responses and other teacher characteristics. Keene administered a 300-item Educational Opinion and Attitude Inventory consisting of 150 items from the MTAI, the 60 items which Gupta found related to high cognitive merit and 90 additional items judged to be related to cognitive merit. The sample was comprised of 336 university elementary education students. Analysis of variance procedures were employed to compare certain teacher characteristics with EOI and MTAI scores. Subjects with relatively high MTAI scores tended to be between 29 to 39 years of age, expected to teach kindergarten, first grade, or late elementary grades, expected to

teach in self-contained classrooms, and had some teaching experience. Subjects with relatively low MTAI scores tended to be either under 20 or over 40, expected to teach in secondary schools or junior high schools, and had either very little or more than ten years of teaching experience. The amount of college education was positively correlated with MTAI scores. Students who had taken particular education and psychology courses also had higher MTAI scores. Subjects who scored high on the 150 EOI items were largely between 20 and 29 years of age or over age 40. They too expected to teach either in self-contained classrooms in very early or late elementary grades. EOI scores were positively correlated with amount of college education but were not related to years of teaching experience. Higher EOI scores were also related to the students' having taken particular education and psychology courses in the teacher education curriculum.

Keene concluded that the high correlation between MTAI scores and EOI scores (r=.61) cast some doubt upon the EOI as a measure of cognitive merit. Although this study failed to <u>confirm</u> the relationship between the EOI and cognitive merit, it seems as though the relationship between the EOI and MTAI is irrelevant in this regard. That is, the EOI items may not measure cognitive merit only, but may measure both cognitive and affective merit. Further study examining the cognitive merit criterion is needed in order to test the hypothesis which Keene rejected.

In summary, the potential validity of the 300 items of the EOI is an empirical question. A major portion of this study will

be devoted to providing information concerning the validity of the items of the EOI. A single study can, of course, provide validity information only with reference to a particular population for a particular use. In the case of this dissertation the focus of interest is upon potential teachers prior to teacher training. Information of this type will be useful in understanding the factors that affect teacher-student rapport and survival in the teaching profession. Further investigation will be necessary to extend knowledge concerning the validity of the instrument beyond these uses.

The Development of A Priori Categories for EOI Items

For purposes of examining patterns of attitudes held by the teacher trainees, the EOI items were divided into the following five a priori categories:

1. Educational Goals.--This category included those items which related to the philosophy of education defined broadly. The nature of knowledge, learning, and education as well as items associated with the purposes of education and the curriculum were included in this category.

2. Teaching Beliefs.--This category included items concerned with the philosophy of teaching. Items relating to the functions, roles, and goals of a teacher were included here.

3. Student Characteristics.--This category included items which stated assumptions about students and their desires, needs, and abilities as they relate to education and learning.

4. Classroom Techniques.--This category included items concerned with actual classroom teacher behavior and classroom techniques and materials for instruction and management.

5. Grading and Evaluation.--This category included items which dealt with the nature, functions, and forms of all types of student evaluation by teachers.

Assignment of items to a category was made on the basis of classification of each item by a group of five independent judges who were experienced teachers. Agreement on the part of three of the five judges was set as the criterion for assignment of an item to a particular category. Appendix II lists the items in each category. Table 3 presents a summary indicating the number of items in each category.

TABLE 3

THE NUMBER OF EOI ITEMS IN EACH A PRIORI CATEGORY

Category	Number of Items
Educational Goals	31
Teaching Beliefs	81
Student Characteristics	40
Classroom Techniques	106
Grading and Evaluation	32
Total	300

The Pupil Inventory

The Pupil Inventory (as shown in Appendix III) is a 20-item instrument written by F. J. McDonald and N. L. Gage. The 20 items are concerned with various dimensions of teacher effective-

ness and are presented in a five-choice Likert format. The Pupil Inventory was administered to all students who participated in the Intern Data Bank Project immediately after each lesson for the purpose of rating the teacher. In order to obtain a measure of teacher-student rapport the Pupil Inventory was factor analyzed. The raw data for this analysis were the mean scores on each item for each of the 153 interns who were rated. The iterative principal factor method was employed to extract three principal factors (Harman, 1960). The principal factor matrix was rotated to orthogonal simple structure by using the varimax criterion (Kaiser, 1958). The resulting factor matrix with factor loadings on each of the three principal factors is shown in Table 4.

Factor I appears to be a broad general "halo" factor consisting of those items which describe the likeability and motivational qualities of the teacher. This factor has a clear simple structure with the 11 items shown in Table 5 (p. 41) having loadings greater than .80. Factor II consists of six items with loadings greater than .55. This second factor shown in Table 6 (p. 42) is characterized by its relationship to the question-asking behavior of the teacher. Table 7 shows the two items which make up factor III (p. 42). This factor appears to be a specific factor consisting of two items and is not readily interpretable psychologically.

On the basis of this analysis Factor I was selected as an appropriate criterion measure of teacher-student rapport. Interns were thus assigned a "rapport score" based upon the sum of the

TABLE 4

ROTATED FACTOR MATRIX OF ITEMS 1-20 OF PUPIL INVENTORY

Variable (Item)	Factor I	Factor II	Factor III
1	.86	.16	.17
2	.88	.13	.04
3	.89	.24	.01
4	.85	.20	.16
5	.83	.10	.20
6	.91	.16	.05
7	.89	.29	.04
8	.82	.27	.15
9	.93	.20	.06
10	.81	.27	.01
11	.90	.26	.07
12	.05	.75	.46
13	.44	.70	.22
14	.07	.44	.76
15	.33	.58	.15
16	.10	.08	.94
17	.36	.72	.01
18	.41	.80	.14
19	.06	.79	.28
20	.78	.48	.05

TABLE 5

PUPIL INVENTORY ITEMS COMPRISING FACTOR I

No.	Item	Loading on Factor I
9.	I would like to be taught by this teacher during the school year	.93
6.	I could learn a lot from this teacher	.91
3.	I found the lesson interesting	.90
11.	Compared to my regular teacher this teacher is (much better)	.90
7.	I think this teacher could get children to work with her (him)	.89
2.	I thought I learned something from this lesson .	.88
1.	I thought this teacher was friendly	.86
4.	I think this teacher likes students	.85
5.	I think this teacher would be fair to students .	.84
8.	After this lesson, I want to learn more about this subject	.82
10.	This teacher could make me want to learn	.81

TABLE 6

PUPIL INVENTORY ITEMS COMPRISING FACTOR II

No.	Item	Loading on Factor II
18.	This teacher taught in a way that encouraged the students to talk about the topic of the lesson during (the whole lesson)	.80
19.	The talking about the topic of the lesson was done by (the teacher almost entirely	.79
12.	How many questions did the teacher ask?	.75
17.	After a student answered a question the teacher encouraged the students to go deeper into what they were thinking	.72
13.	Did the teacher's questions make you think? . .	.70
15.	When the students answered questions, the teacher told them it was a good answer	.58

TABLE 7

PUPIL INVENTORY ITEMS COMPRISING FACTOR III

No.	Item	Loading on Factor III
16.	When the teacher thought a student's answer wasn't very good, the teacher showed disapproval	.94
14.	Did the teacher's questions require only a simple factual answer like "Who discovered America?" or "How many degrees are there in a right angle?"	.76

mean ratings they received on each of the 11 Pupil Inventory items which made up Factor I. The reliability of the 11 items which comprise Factor I was calculated to be .90 using Cronbach's alpha (Cronbach, 1951).

The Career Patterns Interview

The Career Patterns Interview (shown in Appendix IV) was used to provide data concerning the occupational history of the teachers in this study since their completion of the Stanford Secondary Teacher Education Program in June 1968. The information categories of this interview are as follows: (1) education beyond Stanford; (2) occupational history since leaving Stanford; (3) family status; and (4) an evaluation of the Stanford Secondary Teacher Education Program. The "survival-in-the-teaching-profession-criterion" used in this study is derived from Section 2 of the interview. "Survival" is defined as full-time teaching in a public or private secondary school as of the time of the interview. The subjects were interviewed in the time period between December 1, 1969, and March 31, 1970. Of the 163 teacher trainees who began the STEP program in June 1967, 156 successfully completed the program. The career patterns analysis in this study was based upon those 150 persons who completed both the program and the subsequent interview. Of the six remaining subjects, one was deceased and five were not locatable. The career pattern interviews were carried out by telephone in 146 cases. Four persons who were outside the United States responded by mail.

CHAPTER IV

THE EDUCATIONAL ATTITUDES OF PROSPECTIVE TEACHERS AND TEACHER-STUDENT RAPPORT

The first section of this chapter will describe the development of the R Scale of the Educational Opinion Inventory. The R Scale is made up of EOI items which differentiated high-rapport prospective teachers from low-rapport prospective teachers. The second section of this chapter will discuss the items which comprise the R Scale.

Development of the R Scale

A scale was developed from the 300 EOI items which related EOI responses to the criterion variable of teacher-student rapport (R Scale). The purpose was to identify a set of items which would differentiate between prospective teachers who could establish immediate rapport with students as measured by the Pupil Inventory and prospective teachers who were not successful in establishing rapport. The validity of each EOI item for inclusion in the R Scale was thus defined as the degree to which it differentiated between two groups of potential teachers.

The two groups were established on the basis of student ratings on the Pupil Inventory. The high-rapport group was selected as that 27% of the sample receiving the highest Pupil Inven-

tory scores, and the low group as the lowest 27% of the sample (Kelley, 1939). Table 8 presents the means, standard deviations, and range for each group on the Pupil Inventory.

TABLE 8

MEANS, STANDARD DEVIATIONS, AND RANGES OF HIGH- AND LOW-RAPPORT GROUPS ON THE PUPIL INVENTORY

Group	N	Range	Mean	S.D.
High	42	6.76	20.00	1.77
Low	42	14.12	30.49	3.31

A frequency table was constructed from the responses of each of the 84 subjects for each EOI item. This frequency table enabled the comparison of the responses of the two groups to determine possible differences. Items which did not differentiate the groups were discarded for this particular scale, and a scoring key was established for those items which did differentiate. Initial analyses indicated that using the five response categories which were used in the EOI did not yield sufficient frequencies in each cell for accurate computation. However, by combining the categories of "strongly agree" and "agree" and the categories of "strongly disagree" and "disagree," the cell frequencies became large enough to permit statistical tests for significant differences. Inspection of initial analyses using all five categories indicated that little would be sacrificed by collapsing categories since the extremeness of the response did not tend to differentiate the two groups; rather agreement, equivocation, or disagree-

ment with an item was crucial in differentiation. Table 9 provides an example of the frequency tables set up for each item.

TABLE 9

DISTRIBUTION OF FREQUENCY OF RESPONSES OF HIGH- AND LOW-RAPPORT TEACHERS TO ITEM 163[a]

163. A teacher should have something good to say about almost every piece of work a student does.

	Disagree	Undecided	Agree	Total
High-Rapport	12 (30%)	6 (15%)	22 (55%)	40 (100%)
Low-Rapport	23 (56%)	7 (17%)	11 (27%)	41 (100%)
Total	35 (43%)	13 (16%)	33 (41%)	81 (100%)

$\underline{X}^2=7.19$, $\underline{df}=2$, $\underline{p} < .05$

[a]Non-responses: 3.

The response pattern in Table 9 is interpreted as follows: Of the 81 subjects who responded to this item, 35 or 43% disagreed with it ("strongly disagree" or "disagree"). Of the high-rapport teachers, 30% disagreed with the item, while 56% of the low-rapport teachers disagreed. Of the total, 16% were undecided; this included 15% of the high-rapport teachers and 17% of the low-rapport teachers. Of the high-rapport teachers, 55% agreed with the item while only 27% of the low-rapport teachers agreed. It appears that a person who agreed with this item was more likely to establish high rapport with students. The chi-square statistic was employed as an objective measure of the significance of the difference between the response patterns. Table 9 indicates a raw chi-square value of 7.189. The probability of obtaining a chi-

square value of this magnitude for a contingency table with two degrees of freedom by chance is less than .05 ($p < .05$).

This type of analysis was carried out for all 300 EOI items. The results of these analyses are shown in Appendix V. Table 9 demonstrates only one of the various response patterns which differentiated the two groups of subjects. Some items differentiated on the basis of one group being substantially undecided, while the other group either agreed or disagreed with the item (for example, see Appendix V, Item 71). Of the 300 EOI items, 62 items differentiated high-rapport subjects from low-rapport subjects at the .10 level of significance or better. Appendix VI lists the 62 items which comprise the R Scale. Table 10 shows how these items were distributed among the five a priori item categories.

TABLE 10

DISTRIBUTION OF R SCALE ITEMS AMONG A PRIORI EOI CATEGORIES

EOI Category	Number of R Scale Items	Total EOI Items
Goals of Education	6 (10%)	41 (14%)
Teaching Beliefs	18 (29%)	81 (27%)
Student Characteristics	14 (22%)	40 (14%)
Teaching as Practice	18 (29%)	106 (34%)
Grading and Evaluation	6 (10%)	32 (11%)
Total	62 (100%)	300 (100%)

$\underline{X}^2=4.30$, $\underline{df}=4$, $\underline{p} < .05$

A chi square was computed to determine if any particular EOI category contributed a disproportionate number of items to the R Scale. The chi-square value derived was 4.30 with 4 degrees of freedom which is not statistically significant. Thus, the items of the R Scale are drawn from the a priori categories in approximately the same proportion in which they occur in the EOI.

Scoring Key for the R Scale

A key for scoring the R Scale was devised by using a rule based upon the difference in percentage of responses in each category for those 62 items in which the raw chi-square value was statistically significant at the .10 level. Table 11 indicates the percentage of responses in each response category for high- and low-rapport subjects on Item 163. By considering each response category a binomial distribution it was possible to develop a rule which indicated the minimum difference in proportions between groups considered statistically significant. The exact difference varies with each item slightly according to the number of responses in each category; however, this variation is so small as to render separate computation impractical. Therefore, the minimum difference in percentage for all response categories in all items was derived as 10% (Elashoff, 1970). A difference of 10 points or more in percentage of responses in any response category --i.e., a difference in which the "high-rapport" group had the larger percentage--received a score of +1 for that response. A difference of -10% or greater received a score of -1. Differences in response categories between the two groups between -9% and +9%

received a score of 0. Table 11 demonstrates the scoring key for Item 163.

TABLE 11

DISTRIBUTION OF PERCENTAGE OF RESPONSES BY HIGH- AND LOW-RAPPORT TEACHERS TO ITEM 163

163. A teacher should have something good to say about almost every piece of work a student does.

	Disagree	Undecided	Agree
High Rapport	30	15	55
Low Rapport	56	17	27
Difference	-26	- 2	28
Scoring Value	- 1	0	+ 1

A response of "strongly disagree" or "disagree" received a -1, "undecided" responses received 0, and "agree" or "strongly agree" responses received +1. The total score for the R Scale was derived by combining plus and minus scores on the 62 items and then adding 100 in order to eliminate negative scores. Appendix VII contains the plus and minus scoring keys for the R Scale.

With this scoring key for the R Scale, scores for the high- and low-rapport groups were obtained. Results obtained in comparing the scores of the high and low groups are presented in Table 12. There is some overlap between the two groups; but only one subject from the high-rapport group obtained an R Scale score below the mean of the low-rapport group, and only one subject from the low-rapport group received an R Scale score above the mean of the high-rapport group. The reliability of the R Scale was calculated to be .81 using Guttman's L_4 formula (Guttmann, 1949).

TABLE 12

COMPARISON OF R SCALE SCORES OF HIGH-RAPPORT AND LOW-RAPPORT TEACHERS

Statistic	High Rapport	Low Rapport
N	42	42
Range	146 - 83 (53)	130 - 52 (78)
Mean	128.95	100.20
S.D.	9.93	21.07
S.E.	1.61	3.33

Interpretation of the R Scale

The following section will attempt to delineate the attitude patterns which differentiated high- and low-rapport subjects. The discussion will be organized according to the EOI a priori categories. A table which lists the items in that category will accompany each of the sub-sections. The table will also present the percentages of high- and low-rapport subjects that chose the response category that most strongly differentiated the two groups.

Attitudes of High-Rapport Subjects toward the Goals of Education (Table 13)

Education should aspire to more than the imparting of facts.--Two items clearly differentiated high- and low-rapport teachers on the basis of the proper aspirations of education. While 64% of the high-rapport subjects agreed that "A very important function of education is to see to it that students acquire the knowledge basic to a satisfying family life," (Item 116) only 43% of the low-rapport subjects agreed. At the same time a sub-

TABLE 13

EOI ITEMS RELATING TO THE GOALS OF EDUCATION WHICH DIFFERENTIATE HIGH-RAPPORT FROM LOW-RAPPORT SUBJECTS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% High-Rapport	% Low-Rapport	Difference
193	Agree	90.5	61.0	29.5
115	Disagree	69.0	42.9	26.1
161	Disagree	67.5	44.7	22.8
4	Undecided	31.7	9.8	21.9
116	Agree	64.3	42.9	21.4
13	Undecided	23.8	5.4	18.4

stantially greater percentage of high-rapport subjects (69%) than low-rapport subjects (43%) disagreed that "Strong emphasis should be put on mastery of subject matter and memorization of facts as legitimate and desirable ends in education" (Item 115).

The goals of education themselves are a proper topic for mutual investigation by students and teacher.--The largest difference in response percentage between high- and low-subjects for an item in the goals of education category occurred for Item 193, "Learning the processes involved in identifying problems that are worth tackling should be considered a paramount goal for both teachers and students." Over 90% of the high-rapport subjects agreed with this item while only 61% of the low-rapport subjects agreed.

Learning should consist of more than drill.--As a corollary to the first item in this category (Item 116), high-rapport

subjects disagreed more often (68%) with Item 161, "The old saying, 'practice makes perfect,' is after all a rather complete summary of what determines learning"; than did low-rapport subjects (45% disagreed).

Attitudes of High-Rapport Subjects toward Beliefs About Teaching (Table 14)

TABLE 14

EOI ITEMS RELATING TO TEACHER BELIEFS WHICH DIFFERENTIATE HIGH-RAPPORT FROM LOW-RAPPORT SUBJECTS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% High-Rapport	% Low-Rapport	Difference
238	Agree	10.3	47.6	-37.3
290	Agree	76.3	43.9	32.4
6	Undecided	35.7	4.9	30.8
74	Disagree	18.9	48.6	-29.5
241	Agree	59.0	31.7	27.3
46	Agree	7.1	33.3	-26.2
220	Disagree	30.3	55.3	-25.0
47	Agree	40.9	19.0	23.9
190	Disagree	57.1	34.1	23.0
285	Disagree	15.0	36.6	-21.6
231	Disagree	23.8	2.5	21.3
266	Disagree	12.5	33.3	-20.8
24	Disagree	5.1	25.7	-20.6
211	Disagree	5.4	25.6	-20.2
230	Disagree	5.0	23.8	-18.8
23	Disagree	94.4	75.7	18.7
229	Agree	5.0	21.4	-16.4
81	Undecided	11.9	0	11.9

Teachers should be concerned with more than the transmission of subject matter.--Consistent with views expressed concerning educational goals, high-rapport subjects conceive of a broader role for the teacher than do low-rapport subjects. Item 238 states, "The teacher should be primarily concerned with the student's mastery of subject matter." Only 10% of the high-rapport subjects agreed with this item, while 48% of the low-rapport subjects agreed. A substantially greater percentage of high-rapport subjects (81%) than low-rapport subjects (59%) disagreed with Item 46, "Whether or not students are happy in the classroom is much less important than whether or not they are learning what they should be learning." Item 231 states, "Although it is a play on words, there is a lot of truth in the statement that 'teachers should teach students rather than subjects.'" While only 2% of the high-rapport teachers disagreed with Item 231, 24% of the low-rapport teachers disagreed. A further example is Item 229, "Good teaching and general affection for students are two separate things that have little if anything to do with each other." Only 5% of the high-rapport teachers agreed with this item while over 21% of the low-rapport teachers agreed. Item 190 states, "A teacher's job is primarily one of teaching and explaining subject matter." In a predictable manner, over 57% of the high-rapport subjects disagreed with this item while 34% of the low-rapport subjects disagreed.

Personality is an important component of teacher effectiveness.--Three items in the teacher belief category differentiated

high- and low-rapport teachers. They were:

47. "The teacher's personality is far more important to student learning than the methods used to teach subject matter."

74. "The student's learning is affected more by the teacher's personality characteristics than it is by the teacher's instructional procedures."

220. "The personality of the teacher is the most important of his or her pedagogical qualifications."

The interesting pattern which characterized these three items was that while substantial percentages of high-rapport subjects tended to agree (43%, 40%, 42%, respectively), only much smaller percentages of low-rapport subjects agreed (19%, 32%, 21%, respectively). The wording of the items supports the conclusion that high-rapport subjects consider the teacher's personality a component of relatively high importance while low-rapport subjects consider the personality component a less significant factor in teaching.

Teachers should include students in formulating educational objectives.--Item 290, "Teacher and students should share in formulating objectives," was agreed to by 76% of the high-rapport subjects and 44% of the low-rapport subjects. This difference between high- and low-rapport subjects was one of the largest found. Accordingly, it suggests something close to the heart of the attitudes that make a teacher win the favorable regard of students during his first encounter with them.

Attitudes of High-Rapport Subjects toward Characteristics of Students (Table 15)

TABLE 15

EOI ITEMS RELATING TO STUDENT CHARACTERISTICS WHICH DIFFERENTIATE HIGH-RAPPORT FROM LOW-RAPPORT SUBJECTS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% High-Rapport	% Low-Rapport	Difference
100	Agree	79	49	30
204	Disagree	11	41	-30
30	Disagree	28	56	-28
139	Disagree	28	56	-28
51	Disagree	26	52	-26
160	Agree	76	50	26
58	Agree	38	63	-25
146	Disagree	12	37	-25
144	Disagree	13	36	-23
258	Disagree	92	69	23
67	Disagree	18	40	-22
97	Disagree	15	37	-22
86	Disagree	93	76	17
170	Disagree	5	16	-11

Individual differences among students are relevant to educational procedures.--High-rapport subjects consistently more often reflected cognizance of individual differences among students. Item 97 states, "A student's classroom assignments should be determined by his interests and abilities." While 59% of the high-rapport teachers agreed, only 39% of the low-rapport teachers agreed. Item 146 states, "It is only fair to require more of abler

students than of the less able." Only 12% of the high-rapport teachers disagreed with Item 146, but 37% of the low-rapport teachers disagreed. Item 204 relates individual differences to classroom instruction: "Homogeneous grouping of students by class (such as advanced classes, slow classes, etc.) is the most practical solution to the tremendous range of abilities found in students." Over 60% of the high-rapport subjects agreed while 31% of the low-rapport subjects agreed.

Students may be self-motivated to learn.--High-rapport subjects tended to ascribe internal motivational properties to students. For example, Item 58 states, "Without proper training, students' mental abilities will remain undeveloped." Only 38% of the high-rapport subjects agreed, but over 63% of the low-rapport subjects agreed. Similarly, 18% of the high-rapport subjects disagreed that, "Students will think for themselves if permitted" (Item 67), while 40% of the low-rapport subjects disagreed. An item in this category which also lends consistency to attitudes across categories is Item 51: "Students ought to be given a great deal of initiative in deciding what they are to learn and how they are to learn it." While 26% of the high-rapport subjects disagreed, more than half of the low-rapport subjects disagreed (52%). It is interesting to note that over the three a priori categories high-rapport subjects appear to believe that, (1) educational goals should be examined, not passively accepted, (2) teachers should share the responsibility of the examination of educational objectives, and (3) students should be given opportu-

nity to assist in the formulation of educational objectives and methods.

Students need guidance to learn most effectively.--Responses to two items in the student characteristics category indicate that, even though high-rapport teachers have high regard for students, they feel that teaching and guiding learning is both worthwhile and necessary. For example, Item 100 states, "If the material for study is not made interesting for students they will not think or learn to think at all." Over 78% of the high-rapport subjects agreed with Item 100, while only 49% of the low-rapport subjects agreed. Clearly related is Item 160, "Unless the student sees why it is good for him to work on a problem, any work he actually does on it is likely to be done primarily to keep the teacher from bothering him." Exactly 76% of the high-rapport subjects agreed, while 50% of the low-rapport subjects agreed. It seems that the responses of the high-rapport subjects to these items reflect not so much a lack of faith in the student but rather a feeling for the teacher's obligation to make the educational process stimulating and interesting.

Attitudes of High-Rapport Subjects toward Classroom Techniques (Table 16)

Textbooks should be used as supplementary material.--Three items examined the usefulness of textbooks in teaching. Over 67% of the high-rapport subjects agreed that "Typically, texts or courses of study should only be thought of as helps, not requirements, in teaching a subject" (Item 228); 48% of the low-rapport

TABLE 16

EOI ITEMS RELATING TO CLASSROOM TECHNIQUES WHICH DIFFERENTIATE HIGH-RAPPORT FROM LOW-RAPPORT SUBJECTS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% High-Rapport	% Low-Rapport	Difference
166	Undecided	49	16	33
142	Agree	68	36	32
267	Agree	10	41	-31
71	Undecided	53	23	30
254	Undecided	62	32	30
271	Agree	8	38	-30
188	Disagree	81	52	29
18	Agree	18	44	-26
277	Disagree	78	52	26
84	Disagree	52	29	23
228	Agree	68	48	20
278	Undecided	35	15	20
96	Agree	10	29	-19
143	Disagree	5	24	-19
264	Agree	88	69	19
7	Disagree	96	77	18
32	Undecided	6	24	-18
127	Disagree	10	24	-14

agreed. Only 10% of the high-rapport subjects agreed with Item 96, "Textbooks should be the primary focus of most of the teaching-learning activity in the classroom," while over 29% of the low-rapport subjects agreed. Consistently, only 5% of the high-rapport subjects agreed that "Well-chosen textbooks generally present most, say 90%, of the things that students need to know about a

subject, and therefore the use of materials other than textbooks is unimportant" (Item 7), while 21% of the low-rapport subjects agreed with this item.

Teaching does not require a great deal of teacher talk.--Only 10% of the high-rapport subjects agreed that "Good teaching requires a great deal of talking on the part of the teacher" (Item 267), while 41% of the low-rapport subjects agreed. Attitudes toward the quality of teacher talk also were relevant. Over 52% of the high-rapport subjects disagreed with the statement, "Teachers should talk to students just as they would to any adult" (Item 84), while 29% of the low-rapport subjects disagreed.

Classroom techniques should be responsive to individual differences among students.--Consistent with their responses to other categories of items, high-rapport subjects agreed (68%) with Item 142: "Instead of making one-assignment-for-all, a teacher should present the class with several alternative assignments and allow the pupils to choose the ones that best suit their needs." Only 36% of the low-rapport subjects agreed with Item 142.

Particularly interesting results appear for two items which deal with the structuring of instructional material. The items are:

166. "The best way to teach writing emphasizes having the students learn the parts (such as sentences and paragraphs) separately and then coordinate these parts into the whole."

254. "In promoting learning of the skill or practice type, teachers should let students begin with crude 'wholes'

and then gradually improve the 'parts' through practice." For both these items the dominant response of the high-rapport teachers was undecided (49% and 62%, respectively), while only 16% and 32% of the low-rapport subjects were undecided. A possible explanation might be that this response pattern indicates flexibility which correlates with high student-teacher rapport. Or it may be that high-rapport subjects are more secure and willing to admit indecision on matters as debatable as these. On Item 166, 22% of the high-rapport subjects disagreed that "part learning" was more effective while 49% of the low-rapport subjects disagreed. For Item 254, 23% of the high-rapport subjects agreed, and 37% of the low-rapport subjects agreed.

Attitudes of High-Rapport Teachers toward Grading and Evaluation (Table 17)

TABLE 17

EOI ITEMS RELATING TO GRADING AND EVALUATION WHICH DIFFERENTIATE HIGH-RAPPORT FROM LOW-RAPPORT SUBJECTS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% High-Rapport	% Low-Rapport	Difference
164	Disagree	71	41	30
163	Agree	55	27	28
14	Disagree	17	39	-22
224	Undecided	31	9	22
280	Agree	5	21	-16
295	Undecided	22	8	14

Evaluation should be used to provide feedback and not to provide punishment.--The high level of agreement by high-rapport subjects (60%) on Item 14, "The best way to evaluate learning is to avoid grades and instead use descriptive sentences and phrases which describe in full the character of the student's progress in school," is characteristic of this aspect of high-rapport subjects of their attitudes toward evaluation. Only 39% of the low-rapport subjects agreed with Item 14. Another item which differentiated between the groups was Item 295: "Keeping students informed of their progress has little effect on learning." Only 5% of the high-rapport subjects agreed, while 18% of the low-rapport subjects agreed.

Standards for evaluation should be relative rather than absolute.--Here is still another example of an attitude pattern which is relevant across the a priori categories. Over 70% of the high-rapport teachers disagreed with Item 164: "It is only fair to require about the same amount of work from all students." Only 41% of the low-rapport teachers disagreed.

Summary

The foregoing characterization of the attitudes of high-rapport subjects is admittedly inferential. It was developed on an ad hoc basis from items which empirically differentiated high-rapport subjects from low-rapport subjects. Yet a strong and definite pattern of educational attitudes does emerge from inspection of these items. High-rapport subjects appear to be tolerant and progressive, to "believe in" students and teaching. While

they do not have definite ideas about how to teach, they appear to believe in a flexible and sensitive approach to the needs of individual students. Their attitudes are remarkably similar to those attitudes to which teacher training institutions subscribe and which teacher training programs attempt to instill. Even more remarkable is that these high-rapport subjects hold these attitudes before they have ever taught or been exposed to teacher education. If the R Scale can indeed select people who hold these attitudes prior to teacher training and if these attitudes are in fact related to teacher-student rapport, it will truly be a valuable instrument.

CHAPTER V

THE EDUCATIONAL ATTITUDES OF PROSPECTIVE TEACHERS AND SURVIVAL IN THE TEACHING PROFESSION

The first section of this chapter will describe the development of the S Scale of the Educational Opinion Inventory. The S Scale is made up of EOI items which differentiated between those persons trained to be teachers who remained in teaching for at least two academic years and those persons trained to be teachers who never entered teaching or who left after one year. The second section of this chapter will discuss the items which comprise the S Scale

Development of the S Scale

A procedure similar to that used to develop the R Scale was used to develop a scale which related EOI responses to the criterion variable of survival in the teaching profession (S Scale). The purpose here was to produce a set of items which would differentiate those persons who remained in teaching for at least 18 months after completion of teacher training from those persons who completed the program but did not remain in teaching. The validity of each EOI item for inclusion in the S Scale was the statistical significance with which it differentiated between these two criterion groups of subjects. The two groups were

established on the basis of their career patterns as determined from the Career Pattern Interview. The "survivors" were defined as those persons who were teaching full-time in a public or private secondary school (Grades 7-12) at the time of the interview, which occurred some time between 18 and 21 months following completion of the Stanford Secondary Teacher Education Program. Table 18 presents survival data by curriculum and instruction area.

TABLE 18

SURVIVAL IN TEACHING 18-21 MONTHS AFTER GRADUATION AS A FUNCTION OF CURRICULUM AND INSTRUCTION AREA

Area	Survivors	Nonsurvivors	Total
Art	1	5	6
English	16	15	31
Mathematics	6	3	9
Music	2	4	6
Physical Education	3	2	5
Foreign Language	15	11	26
Science	9	5	14
Social Studies	32	21	53
Total	84	66	150

A nonsignificant chi square ($\underline{X}^2$=5.57, $\underline{df}$=7) indicated that survival rates did not vary significantly between curriculum and instruction areas. Table 19 presents survival data by sex. The nonsignificant chi square ($\underline{X}^2$=0.89, $\underline{df}$=1) in this instance indicated proportionally equal attrition from men and women in the teaching profession after 18-21 months. This is contradictory to the popular notion that the dropout rate is higher for females

TABLE 19

SURVIVAL IN TEACHING 18-21 MONTHS FOLLOWING GRADUATION AS A FUNCTION OF SEX

Sex	Survivors	Nonsurvivors	Total
Male	19	15	34
Female	65	51	116
Total	84	66	150

than for males.

Items were selected for the S Scale in the same manner as for the R Scale. Table 20 presents the frequency table, chi-square, percentage differences, and scoring key for Item 54 of the S Scale

TABLE 20

DISTRIBUTION OF FREQUENCY OF RESPONSES OF SURVIVORS AND NONSURVIVORS TO ITEM 54[a]

54. Because concentration must be learned and because it should be learned in school, teachers should assign tasks whose main value is that they require concentration.

	Disagree	Undecided	Agree	Total
Survivors	37 (49%)	20 (26%)	19 (24%)	76 (100%)
Nonsurvivors	17 (29%)	16 (27%)	26 (44%)	59 (100%)
Differences in %	(20%)	(-1%)	(-19%)	
Score	+1	0	-1	

X^2=6.19, df=2, p .10

[a]Non-responses: 15.

It is obvious from Table 20 that survivors are more likely to disagree with Item 54 than nonsurvivors; thus, a "disagree" response receives a +1 score. Since nonsurvivors are more likely to agree with this item, the "agree" response receives a -1 score. When the same chi-square technique used to develop the R Scale was applied, 66 of the 300 EOI items were found to differentiate survivors from nonsurvivors. These 66 items make up the S Scale and are shown in Appendix VIII. The frequency distributions and chi-square computations for the S Scale items are found in Aooendix IX, and the plus-minus scoring key for the S Scale is shown in Appendix X.

Table 21 presents the results obtained in the comparison of S Scale scores of survivors and nonsurvivors. Again, 100 was added to the original score in order to eliminate negative scores. It is clear that although the ranges of the two groups are equal, the means are substantially different. Of the 84 survivors only seven had S Scale scores below the mean score of the nonsurvivors. Conversely, of the 66 nonsurvivors, only six had S Scale scores above the mean score of the survivors. The reliability of the S Scale was computed to be .85 using the Guttman L_4 formula.

Table 22 shows the 66 S Scale items by EOI item category. The nonsignificant chi square (χ^2=1.13, df=4) indicates that the distribution of items by category in the S Scale is proportional to the frequency of items in each category in the total EOI.

Interpretation of the S Scale

This section organizes and presents the attitude patterns which differentiated survivors from nonsurvivors on the basis of

TABLE 21

COMPARISON OF S SCALE SCORES OF SURVIVORS AND NONSURVIVORS

Statistic	Survivors	Nonsurvivors
N	84	66
Range	149 - 64 (75)	145 - 60 (85)
Mean	133.74	114.17
S.D.	16.05	24.97
S.E.	1.79	3.28

TABLE 22

DISTRIBUTION OF S SCALE ITEMS AMONG A PRIORI EOI CATEGORIES

EOI Category	Number of S Scale Items	Total EOI Items
Goals of Education	9 (13%)	41 (14%)
Teaching Beliefs	16 (24%)	81 (24%)
Student Characteristics	9 (13%)	40 (14%)
Teaching as Practice	27 (42%)	106 (34%)
Grading and Evaluation	5 (8%)	32 (11%)
Total	66 (100%)	300 (100%)

responses to the S Scale, in the same manner as was done for the R Scale in Chapter IV. Similarly, a table will accompany each section which lists the items in each a priori category which differentiated the two groups. The table will present the percentage of survivors and nonsurvivors who chose the response category which best differentiated the two groups.

Attitudes of Survivors toward the Goals of Education (Table 23)

TABLE 23

EOI ITEMS RELATING TO THE GOALS OF EDUCATION WHICH DIFFERENTIATE SURVIVORS FROM NONSURVIVORS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% Survivors	% Non-survivors	Difference
130	Disagree	71	47	24
13	Disagree	23	46	-23
35	Agree	15	37	-22
152	Disagree	20	37	-17
257	Agree	6	23	-17
162	Disagree	76	60	16
172	Agree	6	20	-14
210	Agree	4	18	-14
203	Agree	7	19	-12

Education should provide all students with basic learning skills.--Over 76% of the survivors disagreed that "Not every normal child needs to learn how to read, figure, write, and spell" (Item 162), while exactly 60% of the nonsurvivors disagreed. On Item 152, "Pupils should be forced to think," only 19% of the survivors disagreed, while 37% of the nonsurvivors disagreed. On Item 35, "The primary objective of schooling should be to train pupils to handle their problems of social adjustment," 55% of the survivors disagreed, while 39% of the nonsurvivors disagreed. Responses to these items indicate that survivors more often than nonsurvivors view the role of education as primarily intellectual

and academic while the high-rapport subjects did so less often than the low-rapport subjects.

School learning should consist of more than accumulation of facts.--Although survivors see as a basic goal of education the teaching of essential learning skills, certain items indicate that their view of teaching is considerably broader than merely presenting facts for memorization. Item 13 states, "Learning should hardly ever be a matter of the pupils' memorizing content assigned by the teacher so that they can give it back upon demand." Over 63% of the survivors agreed, while 45% of the nonsurvivors agreed. In a consistent manner, only 6% of the survivors agreed that "It is ridiculous that schools should be asked to teach children how to brush their teeth, save money, or organize their personal lives" (Item 257), while over 22% of the nonsurvivors agreed with Item 257. Overall it appears that survivors have a broad and functional philosophy of education. If academic goals are primary, in their view, they still recognize the worth of nonacademic goals. While the views of survivors concerning the goals of education appear to be less progressive than the views of high-rapport subjects, survivors could in no sense be termed educationally reactionary.

Attitudes of Survivors toward Beliefs About Teaching (Table 24)

Teaching requires planning and effort.--Throughout the items in the a priori category related to beliefs about teaching, more survivors than nonsurvivors displayed a tendency to respect

TABLE 24

EOI ITEMS RELATING TO TEACHING BELIEFS WHICH DIFFERENTIATE SURVIVORS FROM NONSURVIVORS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% Survivors	% Non-survivors	Difference
33	Agree	9	34	-25
149	Agree	5	29	-24
292	Disagree	76	52	24
141	Agree	9	31	-22
297	Disagree	81	59	22
189	Disagree	67	46	21
103	Agree	24	44	-20
123	Disagree	85	65	20
282	Agree	37	57	-20
39	Disagree	27	42	-15
94	Disagree	82	67	15
121	Disagree	10	25	-15
213	Agree	7	22	-15
218	Agree	6	20	-14
234	Agree	10	24	-14
276	Agree	9	23	-14

the amount of time and planning necessary for good teaching. Fewer than 7% of the survivors agreed with Item 213, "Preparation for teaching really involves little more than knowing the subject," while over 21% of the nonsurvivors agreed. Only 5% of the survivors also agreed that "It is often unnecessary to plan lessons" (Item 218), while 20% of the nonsurvivors agreed. In addition, only 9% of the survivors agreed that "A good teacher will need review sessions only once or twice a semester" (Item 141), while 30%

of the nonsurvivors agreed.

Teaching is a necessary and worthwhile endeavor.--Related to the importance of teaching is Item 33: "On the whole, teachers are justified in believing that the subjects they teach are quite easy, and that anyone can learn them fully with a little positive help." Of the survivors, 9% agreed with Item 33 while 34% of the nonsurvivors agreed. Similarly, 81% of the survivors disagreed that "It is better for teachers to err on the side of underexplaining rather than overexplaining," while only 59% of the nonsurvivors disagreed. Another item which further asserts survivors' respect for good teaching is the statement that "Good teachers are often less competent critics than poor teachers" (Item 189), with which 67% of the survivors disagreed while 46% of the nonsurvivors disagreed. The respect for the integrity of teaching held by survivors is also indicated by the fact that more than 85% of the survivors disagreed that "Teachers should realize that they simply must teach a large number of facts that are unrelated to each other" (Item 149), while only 63% of the nonsurvivors agreed.

Attitudes of Survivors toward Student Characteristics (Table 25)

Individual differences among students are relevant to educational procedures.--This attitude which differentiated high-rapport from low-rapport subjects, was also found to differentiate between survivors and nonsurvivors. However, the items which reflect this attitude are different in the two cases. Over 73% of the survivors disagreed that "Differentiation of work among pupils

TABLE 25

EOI ITEMS RELATING TO STUDENT CHARACTERISTICS WHICH DIFFERENTIATE SURVIVORS FROM NONSURVIVORS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% Survivors	% Non-survivors	Difference
37	Disagree	67	45	22
132	Disagree	73	51	22
259	Disagree	83	62	21
145	Disagree	83	63	20
258	Agree	6	25	-19
175	Disagree	80	63	17
86	Agree	6	20	-14
170	Agree	90	76	14
129	Disagree	8	21	-13

according to ability does not seem to be a workable idea" (Item 132), while 51% of the nonsurvivors disagreed. Conversely, only 8% of the survivors disagreed with Item 129, "Pupils should not all be encouraged to attack their schoolwork in the same way," while 21% of the nonsurvivors disagreed.

Students require some assistance in planning their schoolwork.--This attitude is consistent with the earlier attitude which emerged in the category on teacher beliefs concerning the demands of teaching. Survivors disagreed more often (83%) than nonsurvivors (62%) with Item 259, "The best way to avoid wasting the powers of a good pupil is to plan his work for him." This indicates that survivors do believe in giving the student some initiative in planning his own work. This is qualified, however, by

Item 145, "When a pupil has had some practice in planning his work in a subject, it is unnecessary for the teacher to preplan activities in the subject." For this item 83% of the survivors disagreed, while 62% of the nonsurvivors disagreed. This qualified respect for student initiative by survivors is evident in two other items. While 90% of the survivors agreed that "Pupils need to be taught how to learn effectively" (Item 170), only 76% of the nonsurvivors agreed. Similarly, 90% of the survivors disagreed that "It is a waste of time to allow children to discuss school subjects among themselves" (Item 86), while 77% of the nonsurvivors disagreed. It appears that while survivors have generally positive attitudes toward students they also feel that the teacher plays an indispensable role in the learning process.

Attitudes of Survivors toward Classroom Teachniques (Table 26)

A teacher should be flexible and vary classroom methods.--Item 48 states, "When introducing a new concept, it should not be necessary for a teacher to repeat it often or present it in several different ways." Of the survivors, 11% agreed with this statement and 28% of the nonsurvivors agreed. Item 165 states, "It is undesirable to allow pupils to do things in a way that is somewhat different from the instructions given them." Of the survivors, 15% agreed, while 34% of the nonsurvivors agreed. Only 4% of the survivors agreed with Item 179, "Most kinds of visual aids are time-wasting, round-about, and burdensome methods of conveying information that can be got better by means of the printed word,"

EOI ITEMS RELATING TO CLASSROOM TECHNIQUES WHICH DIFFERENTIATE SURVIVORS FROM NONSURVIVORS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% Survivors	% Non-survivors	Difference
136	Disagree	69	40	29
208	Disagree	84	58	26
284	Disagree	77	52	25
56	Agree	60	37	23
183	Disagree	43	21	22
63	Disagree	95	74	21
179	Disagree	94	73	21
196	Disagree	69	48	21
263	Disagree	49	28	21
277	Disagree	80	59	21
54	Disagree	49	29	20
96	Disagree	74	54	20
177	Disagree	84	64	20
87	Disagree	77	58	19
93	Agree	32	51	-19
165	Agree	15	34	-19
182	Disagree	90	73	17
48	Agree	11	28	-17
254	Agree	22	39	-17
80	Disagree	86	70	16
126	Disagree	92	76	16
235	Undecided	28	12	16
300	Agree	11	27	-16
89	Undecided	8	23	-15
173	Agree	8	23	-15
265	Disagree	94	80	14
53	Undecided	12	2	10

while 25% of the nonsurvivors agreed.

The classroom atmosphere should be supportive and informal.--Survivors prefer a classroom with a relaxed atmosphere and a high degree of supportive interaction between the teacher and students. Of the survivors, 60% agreed that "Children should be told that they can get their school work if they really try" (Item 56), while only 37% of the nonsurvivors agreed. Of the survivors, 84% disagreed that "Pupils should be required to stand when reciting" (Item 177), while 64% of the nonsurvivors disagreed.

Attitudes of Survivors toward Grading and Evaluation (Table 27)

TABLE 27

EOI ITEMS RELATING TO GRADING AND EVALUATION WHICH DIFFERENTIATE SURVIVORS FROM NONSURVIVORS, RESPONSE CATEGORY OF GREATEST DIFFERENCE, AND PERCENTAGE OF EACH GROUP IN RESPONSE CATEGORY OF GREATEST DIFFERENCE

Item Number	Response Category of Greatest Difference	% Survivors	% Non-survivors	Difference
236	Agree	8	36	-28
248	Disagree	61	35	26
118	Agree	10	33	-23
214	Disagree	80	58	22
202	Disagree	84	67	17

Evaluation should not be used to provide punishment.--The attitude of survivors concerning the undesirability of using grading as a punitive measure is similar to that of high-rapport subjects. Survivors, however, did not express the positive use

of evaluation as a mechanism for feedback expressed by high-rapport subjects. Item 248 states, "It is desirable that school grades (marks) produce competition among pupils." Over 60% of the survivors disagreed, while only 34% of the nonsurvivors disagreed. Similarly, only 8% of the survivors agreed that "Probably the best way to get children to learn is through the setting of high standards and the application of insistent pressure" (Item 236), while 36% of the nonsurvivors agreed.

Standards for evaluation should be relative rather than absolute.--Survivors are sharply differentiated from nonsurvivors by Item 214, which states that "Letter grades (or marks) are mostly a local community affair, and so the community attitude must be given priority in the establishment of what levels of achievement are to correspond with which grades or marks." Of the survivors, 80% agreed with Item 214, while only 58% of the nonsurvivors agreed. This item suggests that survivors have a more relaxed and relativistic conception of educational standards.

Summary

The foregoing characterization of the attitudes of survivors is subject to the same reservations as were mentioned for the attitudes of high-rapport subjects. Probably the most striking characteristic of the attitudes of survivors is the pervasive belief in the integrity of teaching as a profession. Survivors feel teaching is a difficult, time-consuming kind of work. They feel teaching requires enthusiasm, dedication, intelligence and special training. In short, survivors view teaching as a noble and neces-

sary endeavor. Like high-rapport subjects they seem to "believe in" students; yet they feel that a good teacher is necessary for students to learn effectively. The philosophy of education held by survivors might best be described as functional and for the most part oriented toward flexibility within the educational system as it exists. It is again remarkable that these attitudes were formed and held by survivors prior to any exposure to teaching or teacher training. The S Scale will serve a useful purpose for selection if it is able consistently to differentiate persons who hold attitudes similar to survivors in teaching prior to entering the teaching profession.

CHAPTER VI

THE PREDICTION OF RAPPORT AND SURVIVAL USING ADDITIONAL VARIABLES

The purpose of this chapter is to examine the predictive value of attitude and ability measures other than the two scales derived from the EOI as correlates of teacher-student rapport and survival in teaching. The five attitude and ability measures used as predictor variables were:

1. The California F Scale
2. The Kerlinger Scale of Educational Progressivism (A Scale)
3. The Kerlinger Scale of Educational Traditionalism (B Scale)
4. The Graduate Record Examination Verbal
5. The Graduate Record Examination Quantitative

A brief description of the content of these instruments appears in Chapter III.

The technique used to examine the predictive value of these variables was stepwise discriminant analysis. This analysis provides (a) analysis of variance F ratios for the difference between mean scores on the predictor variables between groups, and (b) a linear function which indicates the most efficient combination of predictor variables for classifying subjects into their appropriate groups. Comparisons were made between (a) high- and

low-rapport subjects, and (b) survivors and nonsurvivors. The stepwise discriminant analysis classifies cases in the following manner:

1. An F ratio (analysis of variance) between the groups is computed for each predictor variable.

2. At the first step, the predictor variable with the greatest F ratio is entered, and cases are ranked according to scores on this variable.

3. A linear combination which produces the largest F ratio between the groups is computed for each subsequent predictor variable.

4. The predictor variable whose linear combination with the first predictor variable produces the highest F ratio is entered.

5. All cases are ranked again according to scores on the combined predictor variables.

6. The procedure is repeated until subsequent steps do not affect the ranking of cases, or the number of predictor variables is exhausted.

Predicting Teacher-Student Rapport From a Set of Predictor Variables

The subjects used for these analyses were drawn from the same sample as was used for the R and S Scales. Of the original 164 subjects, 131 completed all the predictor instruments and were rated by students on the Pupil Inventory. The criterion groups were designated as the highest and lowest 27% of the sample

(Kelley, 1939). This classification system yielded a sample of 35 subjects in each group. Table 28 presents the mean and standard deviation on each variable for the high- and low-rapport groups and the F ratio for the significance of the differences between the means. From Table 28 it is clear that none of the variables alone differentiates between high- and low-rapport subjects.

TABLE 28

VARIABLES USED IN THE DISCRIMINANT ANALYSIS BETWEEN HIGH- AND LOW-RAPPORT GROUPS

Variable	High-Rapport (N=35)		Low-Rapport (N=35)		F
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	
F Scale	79.46	22.58	87.86	22.64	1.59
Kerlinger A	84.66	8.34	80.69	11.83	2.63
Kerlinger B	55.83	11.07	58.14	10.70	0.80
GRE Verbal	604.00	97.02	617.14	95.26	2.61
GRE Quantitative	594.29	105.29	547.60	135.30	2.17

F value required for significance at the .05 level with df 5,64 = 3.64

Table 29 indicates the effectiveness of the best linear combination of predictor variables in correctly classifying high and low-rapport subjects. It is evident from Table 29 that of the 35 high-rapport subjects, 12 were misclassified as low-rapport, while 12 low-rapport subjects were misclassified as high-rapport subjects. The phi coefficient for this fourfold table was statistically significant at the .05 level (ϕ=.31). However, since the

percentage of miscalculations of both false positives and false negatives is approximately one-third, the practical significance of this linear discriminant function is at best marginal.

TABLE 29

EFFECTIVENESS OF THE DETERMINED LINEAR DISCRIMINANT FUNCTION IN CORRECTLY IDENTIFYING HIGH- AND LOW-RAPPORT SUBJECTS

Group	Number of Cases Classified into Group		Total
	High Rapport	Low Rapport	
High Rapport	23	12	35
Low Rapport	12	23	35
Total	35	35	70
Φ=0.31*			

*$p < .05$.

Predicting Survival From a Set of Predictor Variables

The discriminant analysis, using teacher survival over 18-21 months as the criterion, was computed using all 131 subjects who completed all the instruments and the subsequent Career Pattern Interview. The sample was divided into survivors and nonsurvivors using the same criteria used for development of the S Scale. This classification yielded a sample of 75 survivors and 56 nonsurvivors. Table 30 presents the mean, standard deviation, and F ratio for the significance of the differences between survivors and nonsurvivors on each variable. It should be noted that for this analysis the Pupil Inventory score for each subject was

TABLE 30

VARIABLES USED IN THE DISCRIMINANT ANALYSIS BETWEEN SURVIVORS AND NONSURVIVORS

Variable	Survivors (N=75)		Nonsurvivors (N=56)		F
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	
F Scale	81.01	21.18	84.13	24.00	0.05
Kerlinger A	83.48	9.31	82.55	10.03	0.23
Kerlinger B	55.75	11.06	59.02	10.74	2.87
GRE Verbal	600.13	95.20	594.46	98.61	0.18
GRE Quantitative	557.28	105.86	539.29	121.01	0.43
Pupil Inventory	25.13	4.44	25.05	4.75	0.23

F value required for statistical significance at the .05 level with df 6,124 = 3.92.

included as a predictor variable. Therefore, six variables rather than five were used to determine the discriminate linear function for survival versus nonsurvival in teaching. Table 30 indicates that none of the means of the six variables differed significantly in the survivor and nonsurvivor groups

The effectiveness of the linear discriminant function incorrectly classifying survivors and nonsurvivors is indicated in Table 31. It is apparent that the best combination of the six predictor variables is not effective in predicting survival in teaching. Of the 75 survivors, 47%, or 35, were incorrectly classified as nonsurvivors, and of the 56 nonsurvivors, 41%, or 23, were incorrectly classified as survivors. The phi coefficient (ϕ=.12) computed for the fourfold table shown in Table 31 is not

statistically significant. This set of predictor variables yielded a high percentage of both false positives and false negatives and was only slightly better than chance in predictive power.

TABLE 31

EFFECTIVENESS OF THE DETERMINED LINEAR DISCRIMINANT FUNCTION IN CORRECTLY IDENTIFYING SURVIVORS AND NONSURVIVORS

Group	Number of Cases Classified into Group		Total
	Survivors	Nonsurvivors	
Survivors	40	35	75
Nonsurvivors	23	33	56
Total	63	68	131
Φ=0.12 (N.S.)			

Intercorrelations Between Predictor Variables

Table 32 shows the Pearson product-moment correlations between the predictor variables for the 131 subjects who completed all the instruments.

Only three correlations in Table 32 are statistically significant. The positive correlation (r=.46) between GRE verbal scores and GRE quantitative scores is consistent with that reported by Guilford (1953) (r=.50) in his review of the Graduate Record Examinations. The positive correlation (r=.62) between F Scale scores and Kerlinger B (traditionalism) scores is not surprising since both scales contain dimensions of conservatism and conventionalism. The negative correlation (r=-.32) between the GRE verbal scores and the F Scale scores is also consistent with

TABLE 32

CORRELATIONS AMONG PREDICTOR VARIABLES FOR TEACHER SURVIVAL

Variable	F Scale	K_A	K_B	GRE_V	GRE_Q	PI
F Scale	1.00					
Kerlinger A	-0.17	1.00				
Kerlinger B	0.62*	-0.06	1.00			
GRE Verbal	-0.32*	-0.09	-0.22	1.00		
GRE Quantitative	-0.08	-0.06	-0.14	0.46*	1.00	
Pupil Inventory	0.14	-0.19	0.10	0.06	-0.18	1.00

*$p < .05$. $N=131$.

earlier results relating education, intelligence, and authoritarianism. Christie (1954) in a review of studies relating the F Scale to other variables stated that the correlation between IQ and F scores is between -.50 and -.60. However, after education is partialed out the correlation between IQ and F scores is reduced to about -.20. In the present sample the number of years of education is constant which may account for the moderate negative relationship between GRE verbal scores and F scores. The almost zero (r=-.08) correlation between GRE quantitative scores and F scores for this sample suggests that possibly the F Scale is differentiating persons not on the basis of a personality dynamic, but rather on the ability to "see through" the transparent F Scale items. That is, persons with higher verbal fluency may simply be better at detecting and giving socially desirable responses.

Summary

The technique of linear discriminant analysis indicates that existing instruments which measure attitudes (California F Scale, Kerlinger Educational Scales) and abilities (Graduate Record Examinations) are of limited utility in the prediction of (1) ability to achieve rapport with students prior to teacher education, and (2) survival in the teaching profession. If the qualities of teacher-student rapport and survival are important, other instruments such as the R and S Scales will be useful additions to a pre-training teacher education test battery for teacher education programs.

CHAPTER VII

INTERPRETATIONS AND SUMMARY

The purpose of this study was to examine initial rapport and survival in teaching as a function of attitudes about education held by potential teachers upon entering a teacher education program. The purpose of this chapter is to present conclusions and implications for further research, and a summary of the study.

Interpretations

The development of the R and S Scales is clearly in its initial stages. Extensive research must be carried out before the scales can be recommended for general use.

Initially, the scales should be cross-validated on other samples to test their external validity. The original sample used in this study was relatively small and was selected primarily on the basis of variables related to academic success, such as undergraduate grade point average, Graduate Record Examination scores, and faculty recommendations. Although the discriminant analysis presented in Chapter VI suggests that Graduate Record Examination scores account for only a small amount of variance in rapport and survival, this may be an effect of the level selected, since the mean Graduate Record Examination Scores for this sample are considerably higher than the norm (mean GRE Verbal = 598; mean GRE

Quantitative = 550). That is, GRE scores may differentially affect rapport or survival, with low scores having an effect and high scores being inconsequential. The discriminant analysis in this study was performed on a sample that had a positively skewed distribution of GRE scores and thus may have been insensitive to an interaction effect. The relationships between other factors correlated with the selection variables and rapport and survival have not been investigated. This indicates that until the scales are tested on diverse samples their generalizability should be considered limited.

The validity reported for the R Scale in Chapter IV was concurrent validity. That is, the R Scale differentiated persons who were able to develop high rapport with students from persons who were not able to do so, at the time the scale was taken. In order to estimate the predictive validity of the R Scale a correlation was computed between the pre-training R Scale scores of the teacher trainees and teacher-pupil rapport (as measured by student ratings on the Pupil Inventory) after three months of teacher training. A positive correlation (r=.31) indicated that the R Scale was able to predict with a moderate degree of accuracy a relatively stable set of teacher behaviors which were objectively verified by student ratings at a later point in time. This result is particularly encouraging since the magnitude of this correlation, while moderate, is higher than that typically found between attitude measures and independently observed behavioral criteria over time (see Chapter IV for a review of studies of predictive validity of the MTAI).

The R and S Scales are actuarial tests whose items are strictly empirically derived. Cronbach (1953) in his review of the Minnesota Teacher Attitude Inventory stated:

> The strictly empirical test is designed to allow scores to include diverse characteristics so long as they predict the criterion. A test designed to measure a psychological quality should be [more] homogeneous and scores should have a logical meaning. . . . An actuarial test permits statements to be made about probability of success. For counseling, however, the writer would prefer to use a test which describes a person's qualities so that he can gain self-understanding [p. 798].

Although the R and S Scales were empirically derived, the pattern of item differentiation and response selection suggests a logical, coherent, and consistent interpretation. In fact, the actuarial approach has yielded information from which psychologically meaningful concepts begin to emerge.

First, a definite component of affective merit of teachers (teacher-student rapport) has been isolated and examined in this study. It is interesting that students are able to differentiate potential teachers with regard to this quality of rapport during their very first exposure to these potential teachers, and before the potential teachers have had any teaching experience. Further, this quality of high rapport was positively and consistently correlated with currently accepted progressive educational beliefs.

This correlation raises many interesting questions: since high- and low-rapport subjects have presumably been exposed to similar educational experiences, what are the socio-cultural or personal influences which cause some to adopt educational attitudes that are related to high teacher-student rapport, and others

to adopt educational attitudes that are related to low teacher-student rapport?

Second, what is the relationship between this component of affective merit; namely teacher-student rapport, and other measures of teacher effectiveness? Are high-rapport teachers better at explaining, asking relevant questions, or providing feedback than low-rapport teachers? These are empirical questions which have been stimulated by this study.

Another interesting phenomenon suggested by this study relates to students' ratings of teachers. Even though the students observed the potential teachers teaching for only forty minutes and had had no previous relationship with them, they consistently identified those teachers with high rapport, the potential teachers who more often had progressive educational attitudes. The students had no chance to observe the long-term teaching behaviors with which these attitudes are manifestly concerned, such as grading policies, flexibility of teaching methods, or sensitivity to individual differences. Yet, somehow, the subjects transmitted enough information in their teaching behavior to allow students accurately to project a great deal of information about future teaching behavior. Thus, the amount of information transmitted by the potential teacher to the student during this "first impression" encounter seems to have been very large, and to have gone far beyond the manifest evidence.

The attitudes held by survivors and which differentiate them from nonsurvivors were somewhat different from the attitudes

distinctive of high-rapport subjects; yet they are also educationally progressive. Certainly their attitudes of high respect for teaching, diligence, and enthusiasm can only be considered praiseworthy. The nonsurvivors, however, subscribed more often than survivors to educational attitudes which contradict current progressive educational beliefs and would be considered "undesirable" by professional educators. Either the nonsurvivors held these attitudes prior to teacher education or it is possible that these "undesirable" attitudes emerged as a function of careless responses to the EOI. That is, the morale and motivation of the nonsurvivors might have been so low at the inception of teacher training that their discreditable responses were a function of carelessness rather than conviction.

In summary, it seems that the R and S Scales may be promising tools for research on teacher effectiveness and longevity in the profession of teaching. However, at this time this study suggests many questions that should be examined empirically. The scales would be most appropriately used now by researchers who can validate them for various purposes and samples. It is as yet premature to use the scales for selection of teacher training applicants.

Summary

A sample of 30 male and 124 female prospective teachers were given a battery of inventories prior to teacher training. Included in this battery was a 300-item Educational Opinion Inventory (EOI). On the days immediately following the administration

of the inventories, each subject taught a 40-minute lesson to 20-30 secondary school students. After the lessons the students were asked to rate each subject on a 20-item Pupil Inventory which elicited responses from the students concerning the teacher-student rapport developed over the 40-minute lesson. From this rating each subject was assigned a rapport score based on the 11 items found through factor analysis to be highly loaded on the same factor. EOI responses of the highest and lowest 27% of the sample on teacher rapport scores were compared in order to find items which differentiated between the high- and low-rapport groups. A set of 62 items, which, on the basis of a chi-square test, differentiated the two groups was designated as the R Scale. Inspection of R Scale items indicated that high-rapport subjects differed from low-rapport subjects in their greater flexibility, higher sensitivity to needs of individual students, and generally more progressive educational philosophy.

Between 18 and 21 months after completion of the teacher education program 150 subjects in the original sample were contacted to determine their career patterns. Of these, 84 subjects were teaching full-time in a secondary school, while 66 had never entered or left the teaching profession. The EOI responses of these two groups (designated as "survivors" and "nonsurvivors") were analyzed to find items which differentiated them. A set of 66 items which differentiated the survivors from the nonsurvivors was designated as the S Scale. Inspection of S Scale items indicated that survivors entered teacher training with attitudes

generally more progressive than those of nonsurvivors and with greater respect for the value of teaching and for the amount of work involved in teaching.

Discriminant analyses were performed using the predictor variables of (1) the California F Scale, (2) the Kerlinger Scale of Educational Progressivism, (3) the Kerlinger Scale of Educational Traditionalism, (4) the Graduate Record Examination Verbal Test, (5) the Graduate Record Examination Quantitative Test. Results of the discriminant analyses indicated that these tests neither singly nor in combination could significantly or efficiently discriminate either high- from low-rapport subjects nor survivors from nonsurvivors.

The study concluded that potential teachers bring educational attitudes to teacher training which markedly affect their relationships with students and their probability of remaining in teaching. In addition, students are able to infer something related to these attitudes, i.e., rapport, from their very first impression of the teacher with no knowledge of the teachers' behaviors or beliefs.

It is suggested that at this stage of their development the R and S Scales should be used only as research tools and that further validation studies should be carried out to determine the potential effectiveness of the scales for guidance and selection purposes.

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APPENDIX I

THE EDUCATIONAL OPINION INVENTORY

Form Bx

This inventory consists of statements designed to bring forth opinions about teaching--its methods, content, goals, etc. There is considerable disagreement about these statements. What is wanted is you own individual opinion about the statements.

Throughout the inventory, think in terms of the secondary school. That is, read the statements as if they referred to teachers, students, and curriculum in grades 7-12.

Read each statement and decide how YOU feel about it. Then mark your answer on the space provided on the answer sheet. Do not make any marks on this booklet.

	1	2	3	4	5
If you strongly agree, blacken space under 5.....					
If you agree, blacken space under 4.....					
If you are undecided or uncertain, blacken space under 3....					
If you disagree, blacken space under 2.....					
If you strongly disagree, blacken space under 1.....					

There is no time limit, but work as rapidly as you can.

PLEASE RESPOND TO EVERY ITEM.

This inventory prepared by N. L. Gage and Morris Weitman.

1. In explaining things to students, a teacher should assume that they can think logically.
2. When using the blackboard, it is best to keep your finger or a pointer on exactly the thing to which you are referring.
3. In the classroom, the teacher should set the tasks and make the decisions.
4. The secondary school should not be permitted to graduate students until they have developed adequate proficiency in English and mathematics.
5. Learning is essentially the training or disciplining of the various faculties that constitute the mind.
6. Careful planning on the part of the teacher will produce an unusual sense of purpose in the students.
7. Well-chosen textbooks generally present most, say 90 per cent, of the things that students need to know about a subject, and therefore the use of materials other than textbooks is unimportant.
8. A given grade level should indicate a definite level of academic achievement.
9. All students are fairly equal in innate intelligence; the difference in I. Q. scores and achievement are only reflections of individual differences in the will to use intelligence.
10. Grading is one of the most important functions of a teacher.
11. School learning should largely consist of acquiring specified content to be used at some future time.
12. It is better to avoid word games and similar exercises in which students compete with one another in front of the whole class.
13. Learning should hardly ever be a matter of the students' memorizing content assigned by the teacher so that they can give it back upon demand.
14. The best way to evaluate learning is to avoid grades and instead use descriptive sentences and phrases which describe in full the character of the student's progress in school.
15. Students' questions are usually quite thoughtful.
16. Education should teach people what to think.
17. When the teacher imposes highly formal methods of attack on problems, he may actually hinder the student from developing a sound personal technique of solving problems.

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18. A teacher should make almost all the decisions about what students are to learn and how they are to learn it.

19. Knowledge of facts must come first if generalizations are to be made, understood, and remembered.

20. Letter grades indicate only that students conformed or did not conform to a set of unknown standards held by a variety of teachers.

21. A good teacher is free to admit his ignorance openly and frequently.

22. Nowadays, schools too often develop everything about the student but his mind.

23. A teacher should teach the prescribed course of study and hardly ever change it.

24. At the undergraduate level, the education of the future teacher should be an education in the liberal arts and sciences.

25. Students ought to be allowed to read just about everything.

26. Any good teacher does for each student essentially what a good parent does for his child.

27. One can be an excellent teacher and yet have only a fair knowledge of the subject matter.

28. The teacher should never enter grades in her record book while pupils are reciting.

29. Teachers should teach subjects rather than attitudes.

30. Students can learn mathematics as well as any other subject.

31. It is unrealistic to conceive of an ideal secondary education which would be the same for all normal students.

32. A teacher should consciously use fairly difficult words quite often so that students may become familiar with them.

33. On the whole, teachers are justified in believing that the subjects they teach are quite easy, and that anyone can learn them fully with a little positive help.

34. Lessons can seldom be well taught unless the teacher is expert in the subject.

35. The primary objective of schooling should be to train students to handle their problem of social adjustment.

36. The most useful form of punishment for poor work on the part of a student is repetition of the work done badly.

37. High school students do not have, by themselves, an instinctive appetite for knowledge.

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38. The primary function of examinations is to help the student evaluate his own learning.

39. The authority of those who teach is often an obstacle to those who want to learn.

40. A teacher need not believe in the value and interest of his subject or subjects in order to do a good job.

41. Teaching should be oriented toward preparing students to do well on city-wide or state-wide tests.

42. Everyone should have a basic liberal education regardless of his occupational goals.

43. A good teacher rarely tells students why they should do things.

44. Generally speaking, it is better to state a question first, and then call on the student to answer it, rather than vice versa.

45. Learning anything worthwhile is difficult, and everyone involved in the process (both teacher and students) finds it tiring.

46. Whether or not students are happy in the classroom is much less important than whether or not they are learning what they should be learning.

47. The teacher's personality is far more important to student learning than the methods used to teach subject matter.

48. When introducing a new concept, it should not be necessary for a teacher to repeat it often or present it in several different ways.

49. Many men know a great deal and are the greater fools for it.

50. Learning by copying down a lesson or memorizing for a test is likely to deter the development of problem-solving ability.

51. Students ought to be given a great deal of initiative in deciding what they are to learn and how they are to learn it.

52. Effective teaching requires that the teacher know thoroughly the personal characteristics and background of his individual students.

53. Teachers should not correct the mistakes made by a student by giving him "right" solutions but rather by giving him guidance in diagnosing his technique of problem solution.

54. Because concentration must be learned and because it should be learned in the school, teachers should assign tasks whose main value is that they require concentration.

55. Teachers should never let sentences get long and involved when talking to students.

56. Students should be told that they can get their school work if they really try.

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57. Keeping school subjects separate and distinct from one another, rather than overlapping, tends to prevent students from getting confused.

58. Without proper training, students' mental abilities will remain undeveloped.

59. One of the most important qualities of a good teacher is a sense of humor.

60. Teachers should plan their work less painstakingly, so that the amount of student initiative can be greater.

61. The acquisition of a fund of knowledge should be a lesser aim of education.

62. It is a good idea to encourage students to say so if they don't agree with a statement the teacher has made.

63. Students should be cautioned to do no more than they are told, to check with the teacher on almost every step.

64. A teacher's job is to form the student's mind, not fill it.

65. A difficult and extremely important task in teaching comes in helping students who don't know what they want to learn.

66. A teacher's main job is to provide pupils with intellectual training.

67. Students will think for themselves if permitted.

68. A good teacher has little need for charts, maps, diagrams and the like.

69. The teacher should appreciate the emptiness of dates in history and the necessity to work systematically to give them meaning.

70. A good teacher prefers helping students learn how to do things by themselves rather than showing them how to do things

71. When a student makes an error in his spoken English, it is usually best to correct him immediately.

72. Knowledge which is organized is learned and retained no better than knowledge which is self-contained.

73. Students must learn many important things by imitating others without understanding what they are learning.

74. The student's learning is affected more by the teacher's personality characteristics than it is by the teacher's instructional procedures.

75. Some students ask too many questions.

76. Teachers should usually begin an explanation with an illustration in terms of some everyday object or event.

77. Students learn much from interaction with their peers; therefore the teacher should provide abundant opportunity for small group discussions in the classroom.

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78. Teaching for efficient learning is essentially directing and telling.

79. Practice in identifying, studying, and solving one's own problems should be considered the main purpose of schooling.

80. Giving concrete examples of generalizations and abstractions confuses students more often than it helps them.

81. A good teacher is one who is careful to avoid doing the students' work for them.

82. It is natural and healthy for a student to resist his teacher.

83. More and more students are coming to know less and less about more and more subjects.

84. Teachers should talk to students just as they would to any adult.

85. A student should expect schoolwork to be interesting.

86. It is a waste of time to allow students to discuss school subjects among themselves.

87. Making the lesson dramatic often results in making the students miss the point of the lesson.

88. A sign that the teacher is doing a good job is to find that at any particular time individual students in a class are working on quite different problems.

89. Often a good teacher will just sit back and let the students do the work.

90. A major factor in the failure of students to do well in mathematics is the ignorance on the part of mathematics teachers of the underlying principles and concepts involved in mathematical operations.

91. Teaching should be interesting, even at the expense of one hundred per cent accuracy.

92. It takes two to fail, just as it takes two to teach.

93. If the entire content of a subject is taken from one textbook or workbook, there is little likelihood that a majority of students will find the material meaningful or interesting.

94. The only thing worth teaching is a principle.

95. Fifteen minutes of work plus one minute of laughter are worth more than twenty minutes of unvaried work.

96. Textbooks should be the primary focus of most of the teaching-learning activity in the classroom.

97. A student's classroom assignments should be determined by his interests and abilities.

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98. There can and should be genuine teacher-student cooperation in determining daily schedules, the teacher seeing that long-term educational objectives are achieved, but the students assuming considerable responsibility in determining daily time allotments.

99. Promotion should be based entirely upon academic achievement.

100. If the material for study is not made interesting for students they will not think, or learn to think, at all.

101. The objectives of secondary education should be essentially the same for all students regardless of any other factors.

102. A student should be told if he is superior to his classmates in ability.

103. The teacher should be the authority in matters of knowledge as well as in matters of discipline.

104. Unless explanations are short, students tend to lose interest and ability to follow.

105. A teacher should keep an eye "peeled" for puzzled expressions and frowns when explaining something to pupils.

106. Teaching the principles of logic as part of the study of science will produce greater understanding of science on the part of the pupils.

107. The most important part of preparation for teaching is mastering the subject matter to be taught.

108. High school students are unable to reason adequately.

109. Letting the faster students help the slower ones is a good way to keep both kinds of students occupied.

110. It is a good policy to tell or explain nothing that the student can obtain or think through for himself.

111. One very good procedure for teachers to follow is merely to assign the material and see that the students put forth the effort to learn.

112. At the beginning of a term or semester, the teacher should ask for and comply with the students' expressed desires and needs in planning the curriculum.

113. Students should be expected to master subject matter regardless of whether it is interesting or not.

114. A teacher generally ought to do a considerable amount of sheer repetition.

115. Strong emphasis should be put on mastery of subject matter and memorization of facts as legitimate and desirable ends in education.

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116. A very important function of education is to see to it that students acquire the knowledge basic to a satisfying family life.

117. When talking to the class, a teacher should single out a particular student and look directly at him or her, and then after a minute or so, single out another student to look at, and so on.

118. It often does a student good to have his work criticized in the presence of other students.

119. Teachers should give students a great deal of practice in mathematics at the blackboard.

120. The teacher's greatest responsibility is to know and present subject matter adequately.

121. If one does not like boys and girls, then one cannot be an effective teacher.

122. The mind of a high school student is like a narrow-necked bottle; it takes in plenty of learning in little drops but any large quantity you try to pour in spills over and is wasted.

123. A teacher need spend only a little time with bright students since they can usually learn by themselves.

124. Teacher training should emphasize giving the future teacher a full awareness of his function rather than presenting him with procedures and methods.

125. Discussion of current political, economic, and social problems should be one of the principal purposes of the school.

126. There is little value in assigning any reading outside of textbooks.

127. Before it starts work, a class should be given a summary of the ground it will cover.

128. Teachers should interrupt themselves frequently to ask students, "Is that clear?" or "Do you understand?" and the like.

129. Students should not all be encouraged to attack their schoolwork in the same way.

130. The more difficult the task, the better for the student.

131. The best teacher is the one who teaches the learner how to teach himself.

132. Differentiation of work among students according to ability does not seem to be a workable idea.

133. A teacher should avoid putting things on the blackboard except when they are particularly suited to blackboard presentation.

134. The use of many and varied concrete examples in teaching is probably unnecessary.

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135. It is generally a good idea for the teacher to try to impress students by demonstrating superior knowledge and competence.

136. Planning by the teacher is a merit in itself since it is impossible to conceive of a bad class being run like clockwork.

137. Good teaching requires a thorough understanding of formal educational objectives.

138. A good teacher schedules some review work for almost every day.

139. It is best to let students work to themselves on the basis of their particular interests and abilities.

140. Unless one enjoys the company of young people in groups, he will not teach them well.

141. A good teacher will need review sessions only once or twice a semester.

142. Instead of making one-assignment-for-all, a teacher should present the class with several alternate assignments and allow the pupils to choose the ones that best suit their needs.

143. A teacher should discourage students from moving around the room freely.

144. One should expect students to forget much that is told them.

145. When a pupil has had some practice in planning his work in a subject, it is unnecessary for the teacher to preplan activities in the subject.

146. It is only fair to require more of abler students than of the less able.

147. The product of "directive" teaching is usually a passive student -- a "sitting and listening" student.

148. It is often better to let students' errors go unnoticed in order to avoid interrupting their activity.

149. Teachers should realize that they simply must teach a large number of facts that are unrelated to each other.

150. All students should be encouraged to believe they can succeed in their work.

151. Teachers should avoid making moment-to-moment and subjective appraisals of how well students are learning.

152. Students should be forced to think.

153. Probably the best way to teach mathematics is by constant drilling, over and over again.

154. Teachers should frequently make assignments that require pupils to memorize things.

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155. A teacher must often ignore the student who is continually raising his hand.

156. Students can be taught many important and valuable things without arousing their interest.

157. During actual instruction, one should seldom let more than a few minutes go by without asking a student to do something, such as answer a question.

158. The content to be learned by students in school should be determined in advance by the teacher or some other authority.

159. In the long run, when teachers determine or dictate assignments, they make systematic learning highly improbable once the teacher is no longer around.

160. Unless the student sees why it is good for him to work on a problem, any work he actually does on it is likely to be done primarily to keep the teacher from bothering him.

161. The old saying, "practice makes perfect," is after all a rather complete summary of what determines learning.

162. Not every normal student needs to take English and mathematics.

163. A teacher should have something good to say about almost every piece of work a student does.

164. It is only fair to require about the same amount of work from all students.

165. It is undesirable to allow students to do things in a way that is somewhat different from the instructions given them.

166. The best way toteach writing emphasizes having the students learn the parts (such as sentences and paragraphs) separately and then coordinate these parts into the whole.

167. It is a waste of time and energy to try to get some students to learn things.

168. One of the worst methods of teaching is to use authoritativeness without persuasion.

169. A good textbook is primarily a well-organized "storehouse of facts."

170. Students need to be taught how to learn effectively.

171. Encouraging students to speak up, recite, and express themselves orally will hardly ever improve their learning.

172. Effective instruction is difficult to reconcile with concern for the development of student initiative and self-appraisal.

173. As a rule, it is a good idea to speak so slowly that the students can write down your lecture word for word.

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174. Most students would like to use good English.

175. It is not necessary that students be forced to think.

176. A good teacher needs to spend little time on clarification.

177. Students should be required to stand when reciting.

178. The teacher who comes to the secondary school with a thoroughly planned program is on the road to failure.

179. Most kinds of visual aids are time-wasting, round-about, and burdensome methods of conveying information that can be got better by means of the printed word.

180. When students seem to think that the teacher knows almost everything there is to know, the teacher is doing a good job.

181. It is presumptuous to change curricula, methods, usages, ideals and traditions without first finding out why they are what they are.

182. It is better to let new subject matter stand "on its own feet" than to point out its connections with previously learned material.

183. The best way of prodding students on to study in the future is to ask them questions, preferably written questions.

184. The most effective learning will take place when the content and order of the lessons is taken from a logically organized textbook.

185. The teacher cannot be effective if he undertakes to deal directly with "real-life" problems, instead of indirectly through the development of generalized intellectual powers.

186. Generally speaking, most of the students in a class should be working at the same thing at the same time.

187. The teacher who relies heavily on textbooks will have more difficulty doing effective teaching.

188. Teachers should make it a point to be wrong occasionally and then acknowledge the fact that they had made a mistake.

189. Good teachers are often less competent as critics than poor teachers.

190. A teacher's job is primarily one of teaching and explaining subject matter.

191. A teacher should continue to urge a student to do better work.

192. A teacher should frequently remind students to ask questions if they do not understand what is being explained.

193. Learning the processes involved in identifying problems that are worth tackling should be considered a paramount goal for both teachers and learners.

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194. Most classroom activity should consist of group projects in which students divide the labor according to their interests and abilities.

195. There are no specific rules for effective teaching.

196. A student can often more easily be taught how to think if the solution to a problem is given at the beginning of study.

197. Letting students get into a fairly regular routine of daily tasks and activities adversely affects learning.

198. The major fault of grading is that teachers claim to encourage one type of educational outcome yet grade or evaluate on an entirely different basis.

199. Teaching should be evaluated in its own right and by its own standards, independently of how much learning results from it.

200. The last three or four days of teaching--where summary and integration should go on--can make a semester succeed or fail.

201. Without practical usefulness, knowledge is also without value.

202. The main purpose served by a teacher's asking questions of the students is to discover whether they have done their work.

203. In most subjects, good tests must call for considerable sheer recall of difficult and isolated bits of knowledge.

204. Homogeneous grouping of students by class (such as advanced classes, slow classes, etc.) is the most practical solution to the tremendous range of abilities found in students.

205. A good teacher must be a determined person.

206. Good teachers frequently caution students against taking for granted what they see or read.

207. Too many persons being prepared to teach below the college level learn a great deal about how to teach but learn too little about what to teach.

208. The success of a lesson is directly proportional to how free of dramatics it is.

209. It is perfectly valid to set a certain test score as passing before the tests are scored.

210. The purpose of teaching science in the secondary school should be to develop mastery of subject matter rather than intellectual curiosity.

211. Teaching techniques must be adapted to the needs and abilities of individual students.

212. Teachers should use tests and the like as a basis for seeing how their teaching can be improved rather than as a basis for grading students.

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213. Preparation for teaching really involves little more than knowing the subject.

214. Letter grades (or marks) are mostly a local community affair, and so the community attitude must be given priority in the establishment of what levels of achievement are to correspond with which grades or marks.

215. One should use the blackboard a great deal, even if only to emphasize a verbal description.

216. The impact of the teacher is far more important than all other aspects of the school environment combined.

217. In most classes, students should be divided into fast, slow, and average groups.

218. It is often unnecessary to plan lessons.

219. Most teachers do not give sufficient explanation in their teaching.

220. The personality of the teacher is the most important of his or her pedagogical qualifications.

221. Teachers should use a variety of books in a given subject to insure that all students will find the subject matter meaningful.

222. There should be extensive and intensive discussions and informal floor talks by students on each significant topic of a course being studied.

223. Teachers should use some of the students' own "lingo" or slang.

224. Often the best way to get students to learn things is to assign some reading and tell them they will be tested on it.

225. A teacher should encourage students to move around the room rather freely.

226. It is usually the uninteresting and difficult subjects that will do the student the most good.

227. Teaching can be done to large classes just as effectively as to small classes.

228. Typically, texts or courses of study should only be thought of as helps, not requirements, in teaching a subject.

229. Good teaching and general affection for students are two separate things that have little if anything to do with each other.

230. A teacher should attempt to keep students' attention by being interesting rather than by asking for attention outright.

231. Although it is a play on words, there is a lot of truth in the statement that "Teachers should teach students rather than subjects."

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232. Teachers should reward effort and penalize lack of effort regardless of the amount of mastery achieved.

233. The use of a wide variety of curricular materials very often leads to confusion.

234. A teacher should never acknowledge her ignorance of a topic in the presence of her students.

235. Teachers should avoid the use of undignified expressions and slang.

236. Probably the best way to get children to learn is through the setting of high standards and the application of insistent pressure.

237. Like the muscle of the body, the "muscle of the mind" will grow strong by exercise or use regardless of the kind of work done.

238. The teacher should be primarily concerned with the student's mastery of subject matter.

239. Teachers should act as if each student's contribution to a discussion is equally important.

240. Failure to master school subjects is almost always due to laziness on the part of the student.

241. A philosophy for teaching is the most practical and useful possession a busy teacher can have.

242. Good teachers never use compulsion of any kind.

243. In the average classroom, where the teacher works with a group of 20 or more students, it is unnecessary to know every individual student well.

244. When beginning a new field of study, a highly important thing for a teacher to do is to check the students' homework in it.

245. Nothing more profound than card tricks and juggling can be taught by mechanical repetition.

246. It is hardly worthwhile to answer most of the questions asked by students since most students wouldn't have to ask questions if they were paying attention.

247. Objective type examinations are bad because they do not force the student to produce original ideas or to organize them.

248. It is desirable that school grades (marks) produce competition among students.

249. Knowledge is frequently emphasized as an educational objective out of all proportion to its usefulness or relevance for the development of the individual.

250. Students are incapable of giving themselves good assignments.

GO ON TO THE NEXT PAGE

251. Even at the risk of boring some students, the teacher should take pains to explain things thoroughly.

252. Schoolwork should never be assigned as a punishment.

253. Teachers should realize that students must inevitably initiate most of the learning that takes place in the classroom, leaving the teacher in the background.

254. In promoting learnings of the skill or practice type, teachers should let students begin with crude "wholes" and then gradually improve the "parts" through practice.

255. A teacher's main function is to "let the students learn."

256. A student should be asked to repeat an oral contribution until it is grammatically correct.

257. It is ridiculous that schools should be asked to teach students how to drive, save money, or organize their personal lives.

258. No attempt to "make learning relevant" will bridge the gap between the classroom and the uninterested student.

259. The best way to avoid wasting the powers of a good student is to plan his work for him.

260. We do not know enough about teaching to make possible the formulation of definite rules and procedures for doing good teaching.

261. In order to teach students to think logically, one needs to arrange their learning in a logical form.

262. A certain amount of bewilderment on the part of the learner (and perhaps the teacher) should be considered a normal aspect of the healthy learning process.

263. Competition should be emphasized in the classroom since it provides motivation for learning.

264. Teachers should be expected to spend some of their free time with students if it will help them learn.

265. The teacher should question students on facts and let understanding of principles take care of itself.

266. It is unrealistic to believe that teaching should enable students to get along without their teacher.

267. Good teaching requires a great deal of talking on the part of the teacher.

268. Teaching should proceed on the principle that the mastery of intellectual material and the acquisition of knowledge are in themselves pleasurable.

269. If a student doesn't understand an assignment, it is usually the teacher's fault.

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270. One should not do a lot of oral evaluating of students' work or behavior.

271. Giving students rational insight into the nature of the number system will not appreciably reduce the amount of drill necessary in the teaching of mathematics.

272. When talking to the class, a teacher should try to look at the class as a whole rather than at individual students.

273. All except the exceptional students should acquire the same knowledge and skills at about the same time.

274. An active discussion, in which students are interested and involved, is educationally worthwhile regardless of what it is about.

275. The best way to teach mathematics is to demonstrate the operations (letting principles take care of themselves) and then assign good concrete problems of varying degrees of difficulty.

276. A few survey courses will suffice to prepare a secondary school teacher in "subject matter" and the rest of the preparation should consist of the study of education as such, e.g., child development and teaching methods.

277. One good, long session on a particular learning activity is worth much more than the same amount of time spread out over several sessions.

278. Calling attention to the accomplishments of others has little value in stimulating achievement.

279. Teaching is an art; it is not a science.

280. Tests should primarily require students to remember things rather than to make judgments and manipulate relationships.

281. A teacher should always check to see whether an explanation has left some students puzzled.

282. The teacher who has instilled knowledge and skill with subject matter has done the most important part of the job.

283. Giving students failing grades does little to promote achievement.

284. If some students don't understand what the teacher is saying while most of the students do understand, then it is hardly fair to the class to take time out for questions.

285. If instruction is clear and systematic, there will be few occasions for disorder or cases of discipline.

286. The best way of discovering whether a class has done its work, is to give them tests, quizzes and examinations.

287. A teacher should remember that the achievement of knowledge and intellectual understanding is unavoidably unpleasant and laborious.

GO ON TO THE NEXT PAGE

288. The different and even conflicting purposes that students have in the classroom are irrelevant and should be ignored.

289. Nonachieving students should be failed.

290. Teacher and students should share in formulating objectives.

291. The lecture method (i.e., talking continuously for fifteen minutes or more on a given subject) is seldom desirable.

292. Teachers often lose some of their effectiveness because they are so energetic.

293. Teachers should get students to use newspapers, magazines, pamphlets, encyclopedias, et cetera, in the classroom, just about as much as they use standard text materials.

294. Competition in the classroom in the form of various kinds of "bees" is generally a desirable kind of learning activity.

295. Keeping students informed of their progress has little effect on learning.

296. In order for maximum learning to occur, it is necessary for both the teacher and the students to have a definite idea of what is to be done.

297. It is better for teachers to err on the side of underexplaining rather than overexplaining.

298. The aim of the secondary school should be focused primarily on the teaching of verbal skills and numerical skills.

299. Efficient teaching requires keeping the students independent of one another.

300. Interrupting students to correct their grammar is generally desirable.

THE END

PLEASE GO BACK AND CHECK TO MAKE SURE THAT YOU HAVE ANSWERED EVERY ITEM. ALSO, PLEASE MAKE SURE THAT YOU HAVE FILLED IN THE BLANKS FOR NAME, ETC., AT THE TOP OF THE ANSWER SHEET AND THE DATA SHEET.

APPENDIX II

EOI ITEMS LISTED BY A PRIORI CATEGORY

EOI ITEMS RELATING TO EDUCATIONAL GOALS

4. The secondary school should not be permitted to graduate students until they have developed adequate proficiency in English and mathematics.

5. Learning is essentially the training or disciplining of the various faculties that constitute the mind.

11. School learning should largely consist of acquiring specified content to be used at some future time.

13. Learning should hardly ever be a matter of the students' memorizing content assigned by the teacher so that they can give it back upon demand.

16. Education should teach people to think.

19. Knowledge of facts must come first if generalizations are to be made, understood, and remembered.

22. Nowadays, schools too often develop everything about the student but his mind.

31. It is unrealistic to conceive of an ideal secondary education which would be the same for all normal students.

35. The primary objective of schooling should be to train students to handle their problem of social adjustment.

42. Everyone should have a basic liberal education regardless of his occupational goals.

45. Learning anything worthwhile is difficult, and everyone involved in the process (both teacher and students) finds it tiring.

49. Many men know a great deal and are the greater fools for it.

61. The acquisition of a fund of knowledge should be a lesser aim of education.

72. Knowledge which is organized is learned and retained no better than knowledge which is self-contained.

79. Practice in identifying, studying, and solving one's own problems should be considered the main purpose of schooling.

92. It takes two to fail, just as it takes two to teach.

95. Fifteen minutes of work plus one minute of laughter are worth more than twenty minutes of unvaried work.

101. The objectives of secondary education should be essentially the same for all students regardless of any other factors.

113. Students should be expected to master subject matter regardless of whether it is interesting or not.

115. Strong emphasis should be put on mastery of subject matter and memorization of facts as legitimate and desirable ends in education.

116. A very important function of education is to see to it that students acquire the knowledge basic to a satisfying family life.

125. Discussion of current political, economic, and social problems should be one of the principal purposes of the school.

130. The more difficult the task, the bester for the student.

152. Students should be forced to think.

158. The content to be learned by students in school should be determined in advance by the teacher or some other authority.

161. The old saying, "practice makes perfect," is after all a rather complete summary of what determines learning.

162. Not every normal student needs to take English and mathematics.

172. Effective instruction is difficult to reconcile with concern for the development of student initiative and self-appraisal.

181. It is presumptuous to change curricula, methods, usages, ideals and traditions without first finding out why they are what they are.

193. Learning the processes involved in identifying problems that are worth tackling should be considered a paramount goal for both teachers and learners.

200. The last three or four days of teaching -- where summary and integration should go on -- can make a semester succeed or fail.

201. Without practical usefulness, knowledge is also without value.

203. In most subjects, good tests must call for considerable sheer recall of difficult and isolated bits of knowledge.

210. The purpose of teaching science in the secondary school should be to develop mastery of subject matter rather than intellectual curosity.

226. It is usually the uninteresting and difficult subjects that will do the student the most good.

233. The use of a wide variety of curricular materials very often leads to confusion.

237. Like the muscle of the body, the "muscle of the mind" will grow strong by exercise or use regardless of the kind of work done.

249. Knowledge is frequently emphasized as an educational objective out of all proportion to its usefulness or relevance for the development of the individual.

257. It is ridiculous that schools should be asked to teach students how to drive, save money, or organize their personal lives.

287. A teacher should remember that the achievement of knowledge and intellectual understanding is unavoidably unpleasant and laborious.

298. The aim of the secondary school should be focused primarily on the teaching of verbal skills and numberical skills.

EOI ITEMS RELATING TO BELIEFS ABOUT TEACHING

6. Careful plannong on the part of the teacher will produce an unusual sense of purpose in the students.

21. A good teacher is free to admit his ignorance openly and frequently.

23. A teacher should teach the prescribec course of study and harly ever change it.

24. At the undergraduate level, the education of the future teacher should be an education in the liberal arts and sciences.

26. Any good teacher does for each student essentially what a good parent does for his child.

27. One can be an excellent teacher and yet have only a fair knowledge of the subject matter.

29. Teachers should teach subjects rather than attitudes.

33. One the whole, teachers are justified in believing that the subjects they teach are quite easy, and that anyone can learn them fully with a little positive help.

34. Lessons can seldom be well taught unless the teacher is expert in the subject.

39. The authority of those who teach is often an obstacle to those who want to learn.

40. A teacher need not believe in the value and interest of his subject or subjects in order to do a good job.

46. Whether or not students are happy in the classroom is much less important than whether or not they are learning what they should be learning.

47. The teacher's personality is far more important to student learning than the methods used to teach subject matter.

52. Effective teaching requires that the teacher know thoroughly the personal characteristics and background of his individual students.

59. One of the most important qualities of a good teacher is a sense of humor.

64. A teacher's job is to form the student's mind, not fill it.

65. A difficult and extremely important task in teaching comes in helping students who don't know what they want to learn.

66. A teacher's main job is to provide pupils with intellectual training.

74. The student's learning is affected more by the teacher's personality characteristics than it is by the teacher's instructional procedures.

78. Teaching for efficient learning is essentially directing and telling.

81. A good teacher is one who is careful to avoid doing the students' work for them.

90. A major factor in the failure of students to do well in mathematics is the ignornace on the part of mathematics teachers of the underlying principles and concepts involved in mathematical perations.

91. Teaching should be interesting, even at the expense of one hundred per cent accuracy.

94. The only thing worth teaching is a principle.

98. There can and should be genuine teacher-student cooperation in determining daily schedules, the teacher seeing that long-term educational objectives are achieved, but the students assuming considerable responsibility in determining daily time allotments.

103. The teacher should be the authority in matters of knowledge as well as in matters of discipline.

111. One very good procedure for teachers to follow is merely to assign the material and see that the students put forth the effort to learn.

112. At the beginning of a term or semester, the teacher should ask for and comply with the students' expressed desires and needs in planning the curricul .

120. The teach 's greatest responsibility is to know and present subject matter adequately.

121. If one does not like boys and girls, then one cannot be an effective teacher.

123. A teacher need spend only a little time with bright students since they can usually learn by themselves.

124. Teacher training should emphasize giving the future teacher a full awareness of his function rather than presenting him with procedures and methods.

131. The best teacher is the one who teaches the learner how to teach himself.

135. It is generally a good idea for the teacher to try to impress students by demonstrating superior knowledge and competence.

137. Good teaching requires a thorough understanding of formal educational objectives.

138. A good teacher schedules some review work for almost every day.

140. Unless one enjoys the company of young people in groups, he will not teach them well.

141. A good teacher will need review sessions only once or twice a semester.

147. The product of "directive" teaching is usually a passive student -- a "sitting and listening" student.

149. Teachers should realize that they simply must teach a large number of facts that are unrelated to each other.

156. Students can be taught many important and valuable things without arousing their interest.

159. In the long run, when teachers determine or dictate assignments, they make systematic learning highly improbable once the teacher is no longer around.

168. One of the worst methods of teaching is to use authoritativeness without permission.

178. The teacher who comes to the secondary school with a thoroughly planned program is on the road to failure.

180. When students seem to think that the teacher knows almost everything there is to know, the teacher is doing a good job.

185. The teacher cannot be effective if he undertakes to deal directly with "real-life" problems, instead of indirectly through the development of generalized intellectual powers.

189. Good teachers are often less competent as critics than poor teachers.

190. A teacher's job is primarily one of teaching and explaining subject matter.

191. A teacher should continue to urge a student to do better work.

195. There are no specific rules for effective teaching.

199. Teaching should be evaluated in its own right and by its own standards, independently of how much learning results from it.

205. A good teacher must be a determined person.

206. Good teachers frequently caution students against taking for granted what they see or read.

207. Too many persons being prepared to teach below the college level learn a great deal about how to teach but learn too little about what to teach.

211. Teaching techniques must be adapted to the needs and abilities of individual students.

213. Preparation for teaching really involves little more than knowing the subject.

216. The impact of the teacher is far more important than all other aspects of the school environment combined.

218. It is often unnecessary to plan lessons.

220. The personality of the teacher is the most important of his or her pedagogical qualifications.

227. Teaching can be done to large classes just as effectively as to small classes.

229. Good teaching and general affection for students are two separate things that have little if anything to do with each other.

230. A teacher should attempt to keep students' attention by being interesting rather than by asking for attention outright.

231. Although it is aply on words, there is a lot of truth in the statement that "Teachers should teach students rather than subjects."

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296. In order for maximum learning to occur, it is necessary for both the teacher and the students to have a definite idea of what is to be done.

297. It is better for teachers to err on the side of underexplaining rather than overexplaining.

EOI ITEMS RELATING TO STUDENT CHARACTERISTICS

1. In explaining things to students, a teacher should assume that they can think logically.

9. All students are fairly equal in innate intelligence; the difference in I. Q. socres and achievement are only reflections of individual differences in the will to use intelligence.

15. Students' questions are usually quite thoughtful.

30. Students can learn mathematics as well as any other subject.

37. High school students do not have, by themselves, an instinctive appetite for knowledge.

51. Students ought to be given a great deal of initiative in deciding what they are to learn and how they are to learn it.

58. Without proper training, students' mental abilities will remain undeveloped.

67. Students will think for themselves if permitted.

75. Some students ask too many questions.

82. It is natural and healthy for a student to resist his teacher.

83. More and more students are coming to know less and less about more and more subjects.

85. A student should expect schoolwork to be interesting.

86. It is a waste of time to allow students to discuss school subjects among themselves.

97. A student's classroom assignments should be determined by his interests and abilities.

100. If the material for study is not made interesting for students they will not think, or learn to think, at all.

102. A student should be told if he is superior to his classmates in ability.

108. High school students are unable to reason adequately.

122. The mind of a high school student is like a narrow-necked bottle; it takes in plenty of learning in little drops but any large quantity you try to pour in spills over and is wasted.

129. Students should not all be encouraged to attack their schoolwork in the same way.

132. Differentiation of work among students according to ability does not seem to be a workable idea.

139. It is best to let students work to themselves on the basis of their particular interests and abilities.

144. One should expect students to forget much that is told them.

145. When a pupil has had some practice in planning his work in a subject, it is unnecessary for the teacher to preplan activities in the subject.

146. It is only fair to require more of abler students than of the less able.

160. Unless the student sees why it is good for him to work on a problem, any work he actually does on it is likely to be done primarily to keep the teacher from bothering him.

167. It is a waste of time and energy to try to get some students to learn things.

170. Students need to be taught how to learn effectively.

174. Most students would like to use good English.

175. It is not necessary that students be forced to think.

204. Homogeneous grouping of students by class (such as advanced classes, slow classes etc.) is the most practical solution to the tremendous range of abilities found in students.

217. In most classes, students should be divided into fast, slow, and average groups.

240. Failure to master school subjects is almost always due to laziness on the part of the student.

246. It is hardly worthwhile to answer most of the questions asked by students since most students wouldn't have to ask questions if they were paying attention.

250. Students are incapable of giving themselves good assignments.

258. No attempt to "make learning relevant" will bridge the gap between the classroom and the uninterested student.

259. The best way to avoid wasting the powers of a good student is to plan his work for him.

262. A certain amount of bewilderment on the part of the learner (and perhaps the teacher) should be considered a normal aspect of the healthy learning process.

269. If a student doesn't understand an assignment, it is usually the teacher's fault.

273. All except the exceptional students should acquire the same knowledge and skills at about the same time.

288. The different and even conflicting purposes that students have in the classroom are irrelevant and should be ignored.

EOI ITEMS RELATING TO CLASSROOM TECHNIQUES

2. When using the blackboard, it is best to keep your finger or a pointer on exactly the thing to which you are referring.

3. In the classroom, the teacher should set the tasks and make the decisions.

7. Well-chosen textbooks generally present most, say 90 per cent, of the things that students need to know about a subject, and therefore the use of materials other than textbooks is unimportant.

12. It is better to avoid word games and similar exercises in which students compete with one another in front of the whole class.

17. When the teacher imposes highly formal methods of attack on problems, he may actually hinder the student from developing a sound personal technique of solving problems.

18. A teacher should make almost all the decisions about what students are to learn and how they are to learn it.

25. Students ought to be allowed to read just about everything.

32. A teacher should consciously use fairly difficult words quite often so that students may become familiar with them.

41. Teaching should be oriented toward preparing students to do well on city-wide or state-wide tests.

43. A good teacher rarely tells students why they should do things.

44. Generally speaking, it is better to state a question first, and then call on the student to answer it, rather than vice versa.

48. When introducing a new concept, it should not be necessary for a teacher to repeat it often or present it in several different ways.

50. Learning by copying down a lesson or emeorizing for a test is likely to deter the development of problem-solving ability.

53. Teachers should not correct the mistakes made by a student by giving him "right" solutions but rather by giving him guidance in diagnosing his technique of problem solution.

54. Because concentration must be learned and because it should be learned in the school, teachers should assign tasks whose main value is that they require concentration.

55. Teachers should never let sentences get long and involved when talking to students.

56. Students should be told that they can get their school work if they really try.

57. Keeping school subjects separate and distinct from one another, rather than overlapping, tends to prevent students from getting confused.

60. Teachers should plan their work less painstakingly, so that the amount of student initiative can be greater.

62. It is a good idea to encourage students to say so if they don't agree with a statement the teacher has made.

63. Students should be cautioned to do no more than they are told, to check with the teacher on almost every step.

68. A good teacher has little need for charts, maps, diagrams and the like.

69. The teacher should appreciate the emptiness of dates in history and the necessity to work systematically to give them meaning.

70. A good teacher prefers helping students learn how to do things by themselves rather than showing them how to do things.

71. When a student makes an error in his spoken English, it is usually best to correct him immediately.

73. Students must learn many important things by imitating others without understanding what they are learning.

76. Teachers should usually begin an explanation with an illustration in terms of some everyday object or event.

77. Students learn much from interaction with their peers; therefore the teacher should provide abundant opportunity for small group discussions in the classroom.

80. Giving concrete examples of generalizations and abstractions confuses students more often than it helps them.

84. Teachers should talk to students just as they would to any adult.

87. Making the lesson dramatic often results in making the students miss the point of the lesson.

88. A sign that the teacher is doing a good job is to find that at any particular time individual students in a class are working on quite different problems.

89. Often a good teacher will just sit back and let the students do the work.

93. If the entire content of a subject is taken from one textbook or workbook, there is little likelihood that a majority of students will find the material meaningful or interesting.

96. Textbooks should be the primary focus of most of the teaching-learning activity in the classroom.

104. Unless explanations are short, students tend to lose interest and ability to follow.

105. A teacher should keep an eye "peeled" for puzzled expressions and frowns when explaining something to pupils.

106. Teaching the principles of logic as part of the study of science will produce greater understanding of science on the part of the pupils.

107. The most important part of preparation for teaching is mastering the subject matter to be taught.

109. Letting the faster students help the slower ones is a good way to keep both kinds of students occupied.

110. It is a good policy to tell or explain nothing that the student can obtain or think through for himself.

114. A teacher generally ought to do a considerable amount of sheer repetition.

117. When talking to the class, a teacher should single out a particular student and look directly at him or her, and then after a minute or so, single out another student to look at, and so on.

119. Teachers should give students a great deal of practice in mathematics at the blackboard.

126. There is little value in assigning any reading outside of textbooks.

127. Before it starts work, a class should be given a summary of the ground it will cover.

128. Teachers should interrupt themselves frequently to ask students, "Is that clear?" or "Do you understand?" and the like.

133. A teacher should avoid putting things on the blackboard except when they are particularly suited to blackboard presentation.

134. The use of many and varied concrete examples in teaching is probably unnecessary.

136. Planning by the teacher is a merit in itself since it is impossible to conceive of a bad class being run like clockwork.

142. Instead of making one-assignment-for-all, a teacher should present the class with several alternate assignments and allow the pupils to choose the ones that best suit their needs.

143. A teacher should discourage students from moving around the room freely.

153. Probably the best way to teach mathematics is by constant drilling, over and over again.

154. Teachers should frequently make assignments that require pupils to memorize things.

155. A teacher must often ignore the student who is constantly raising his hand.

157. During actual instruction, one should seldom let more than a few minutes go by without asking a student to do something, such as answer a question.

165. It is undesirable to allow students to do things in a way that is somewhat different from the instructions given them.

166. The best way to teach writing emphasizes having the students learn the parts (such as sentences and paragraphs) separately and then coordinate these parts into the whole.

169. A good textbook is primarily a well-organized "storehouse of facts."

171. Encouraging students to speak up, recite, and express themselves orally will hardly ever improve their learning.

173. As a rule, it is a good idea to speak so slowly that the students can write down your lecture word for word.

176. A good teacher needs to spend little time on clarification.

177. Students should be required to stand when reciting.

179. Most kinds of visual aids are time-wasting, round-about, and burdensome methods of conveying information that can be got better by means of printed word.

182. It is better to let new subject matter stand "on its own feet" than to point out its connections with previously learned material.

183. The best way of prodding students on to study in the future is to ask them questions, preferably written questions.

184. The most effective learning will take place when the content and order of the lessons is taken from a logically organized textbook.

186. Generally speaking, most of the students in a class should be working at the some thing at the same time.

187. The teacher who relies heavily on textbooks will have more difficulty doing effective teaching.

188. Teachers should make it a point to be wrong occasionally and then acknowledge the fact that they had made a mistake.

192. A teacher should frequently remind students to ask questions if they do not understand what is being explained.

194. Most classroom activity should consist of group projects in which students divide the labor according to their interests and abilities.

196. A student can often more easily be taught how to think if the solution to a problem is given at the beginning of study.

197. Letting students get into a fairly regular routine of daily tasks and activities adversely affects learning.

208. The success of a lesson is directly proportional to how free of dramatics it is.

215. One should use the blackboard a great deal, even if only to emphasize a verbal description.

219. Most teachers do not give sufficient explanation in their teaching.

221. Teachers should use a variety of books in a given subject to insure that all students will find the subject matter meaningful.

222. There should be extensive and intensive discussions and informal floor talks by students on each significant topic of a course being studied.

223. Teachers should use some of the students' own "lingo" or slang.

225. A teacher should encourage st[illegible] move around the room rather freely.

228. Typically, texts or courses of study should only be thought of as helps, not requirements, in teaching a subject.

235. Teachers should avoid the use of undignified expressions and slang.

239. Teachers should act as if each student's contribution to a discussion is equally important.

245. Nothing more profound than card tricks and juggling can be taught by mechanical repetition.

251. Even at the risk of boring some students, the teacher should take pains to explain things thoroughly.

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277. One good, long session on a particular learning activity is worth much more than the same amount of time spread out over several sessions.

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284. If some students don't understand what the teacher is saying while most of the students do understand, then it is hardly fair to the class to take time out for questions.

291. The lecture method (i.e., talking continuously for fifteen minutes or more on a given subject) is seldom desirable.

293. Teachers should get students to use newspapers, magazines, pamphlets, encyclopedias, et cetera, in the classroom, just about as much as they use standard text materials.

294. Competition in the classroom in the form of various kinds of "bees" is generally a desirable kind of learning activity.

299. Efficient teaching requires keeping the students independent of one another.

300. Interrupting students to correct their grammar is generally desirable.

EOI ITEMS RELATING TO GRADING AND EVALUATION

8. A given grade level should indicate a definite level of academic achievement.

10. Grading is one of the most important functions of a teacher.

14. The best way to evaluate learning is to avoid grades and instead use descriptive sentences and phrases which describe in full the character of the student's progress in school.

20. Letter grades indicate only that students conformed or did not conform to a set of unknown standards held by a variety of teachers.

28. The teacher should never enter grades in her record book while pupils are reciting.

36. The most useful form of punishment for poor work on the part of student is repetition of the work done badly.

38. The primary function of examinations is to help the student evaluate his own learning.

99. Promotion should be based entire upon academic achievement.

118. It often does a student good to have his work criticized in the presence of other students.

148. It is often better to let students' errors go unnoticed in order to avoid interrupting their activity.

150. All students should be encouraged to believe they can succeed in their work.

151. Teachers should avoid making moment-to-moment and subjective appraisals of how ell students are learning.

163. A teacher should have something good to say about almost every piece of work a student does.

164. It is only fair to require about the same amount of work from all students.

198. The major fault of grading is that teachers claim to encourage one type of educational outcome yet grade or evaluate on an entirely different basis.

202. The main purpose served by a teacher's asking questions of the students is to discover whether they have done their work.

209. It is perfectly valid to set a certain test score as passing before the tests are scored.

212. Teachers should use tests and the like as a basis for seeing how their teaching can be improved rather than as a basis for grading students.

214. Letter grades (or makrs) are mostly a local community affair, and so the community attitude must be given priority in the establishment of what levels of achievement are to correspond with which grades or marks.

224. Often the best way to get students to learn things is to assign some reading and tell them they will be tested on it.

232. Teachers should reward effort and penalize lack of effort regardless of the amount of mastery achieved.

236. Probably the best way to get children to learn is through the setting of high standards and the application of insistent pressure.

244. When beginning a new field of study, a highly important thing for a teacher to do is to check the students' homework in it.

247. Objective type examinations are bad because they do not force the student to produce original ideas or to organize them.

248. It is desirable that school grades (marks) produce competition among students.

252. Schoolwork should never be assigned as a punishment.

270. One should not do a lot of oral evaluating of students' work or behavior.

280. Tests should primarily require students to remember things rather than to make judgments and manipulate relationships.

283. Giving students failing grades does little to promote achievement.

286. The best way of discovering whether a class has done its work, is to give them tests, quizzes and examinations.

289. Nonachieving students should be failed.

295. Keeping students informed of their progress has little effect on learning.

APPENDIX III

THE PUPIL INVENTORY

Stanford Research Project on Intern Teaching
Pupil Inventory

Teacher's Name_____

Name_____ Room # _____

Part I: Directions

You have just finished a lesson taught to you by a teacher. We would like to know how you felt about that lesson. Did you like the lesson? Did you like the teacher? Did you feel that you learned something? To help us find out how you felt about these items, please answer the questions below. Some of them are given to you as statements which you are to agree or disagree with.

1. I thought this teacher was friendly.

   1.Strongly agree

   2.Agree

   3.I don't know

   4.Disagree

   5.Strongly disagree

2. I thought I had learned something from this lesson.

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

3. I found the lesson interesting.

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

4. I think this teacher likes students.

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

5. I think this teacher would be fair to students.

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

6. I could learn a lot from this teacher.

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

7. I think this teacher could get children to work with her (him).

   1. Strongly agree

   2. Agree

   3. I don't know

   4. Disagree

   5. Strongly disagree

8. After this lesson, I want to learn more about this subject.

   1. Yes definitely.

   2. Yes probably

   3. I don't know

   4. Probably not

   5. Definitely not

9. I would like to be taught by this teacher during the school year.

   1. Yes definitely
   2. Yes probably
   3. I don't know
   4. Probably not
   5. Definitely not

10. This teacher could make me want to learn

   1. Not very much
   2. Some
   3. Maybe
   4. Maybe a little
   5. A whole lot

11. Compared to my regular teacher this teacher is

   1. Much better
   2. Somewhat better
   3. About the same
   4. Somewhat worse
   5. A lot worse

Part II: Directions

The following questions deal with the way your teacher taught the lesson. Your answers will not be seen by the teacher: the teacher will receive a summary showing how all the students felt, but no individual student will be identified. For each statement, mark on your answer sheet the number of the choice that best answers the question or describes how you feel.

12. How many questions did the teacher ask?

   1. None (If the teacher asked no questions at all, skip Questions 14-18, and go directly to Questions 19-23.
   2. Very few
   3. About like most teachers
   4. More than most teachers
   5. A lot

13. Did the teacher's questions make you think?

   1. Yes, a lot
   2. Yes, frequently
   3. Only occasionally
   4. Not very often
   5. Very rarely

14. Did the teacher's questions require only a simple, factual answer, like "Who discovered America?" or "How many degrees are there in a right angle?"

   1. Almost all the questions were like that.
   2. Most of the questions were like that.
   3. About half of the questions were like that.
   4. Most of the questions were not like that.
   5. Almost all of the questions were not like that.

15. When the students answered questions, the teacher told them it was a good answer

   1. Almost always
   2. Most of the time
   3. Usually.
   4. Sometimes
   5. Rarely, if ever.

16. When the teacher thought a student's answer wasn't very good, the teacher showed disapproval

   1. Almost always
   2. Most of the time
   3. About half the time
   4. Occasionally
   5. Rarely, if ever.

17. After a student answered a question, the teacher encouraged the students to go deeper into what they were thinking.

1. Almost all the time
2. Most of the time
3. Frequently
4. Occasionally
5. Rarely, if ever

18. This teacher taught in a way that encouraged the students to talk about the topic of the lesson during

1. The whole lesson
2. Most of the lesson
3. A good portion of the lesson
4. Some of the lesson
5. Very little of the lesson

19. The talking about the topic of the lesson was done by

1. The teacher almost entirely
2. The teacher for the most part
3. The teacher and students about equally
4. The students for the most part
5. The students almost entirely

20. When I compare this teacher with others I have had, I would say that this one made me think

1. A great deal more
2. Somewhat more
3. About as much as the others did
4. Somewhat less
5. A great deal less

APPENDIX IV

THE CAREER PATTERN INTERVIEW

Information Sheet

- The Longitudinal Study is a part of a research project conducted by the School of Education.

- Funded by Stanford Center for Research and Development in Teaching.

- Purpose:
  Stanford is now planning extensive revisions of the Intern Program for 1971, and we want to use this information in establishing the goals and format for the new program.

- Confidentiality:
  Each Intern is assigned an identification code number which is then used in all analyses. Any published results will appear strictly as statistics.

Stanford University
School of Education
Stanford Teacher Education Program

Longitudinal Study

Interviewer's introduction:

Hello, I'm _____. I am calling from Stanford University's School of Education. We are conducting a longitudinal study of career profiles of all the people who were in the Stanford Intern Teaching Program. You are

(name of Intern) of the class of _____? We would like to ask you a few questions about what you have been doing since you left Stanford. This will take about ten minutes.

QUESTIONNAIRE

I. Education beyond Stanford

1. Have you done any graduate work or taken any courses since you left Stanford?
   a. When?
   b. Where?
   c. Number of credits.
   d. Degree? In what?

2. Do you have certification in education? In what area?
   1. Teaching (level)
   2. Administration (level)
   3. Counseling (level)
   4. Supervision (level)
   5. Other

3. Do you plan to go back to school or take any courses sometime in the future? Where?

II. Occupation

A. In education

a. When did you begin this job? (fall of 19)
b. School description:

What is the full name and address of your school?

What grade level is it?

1. elementary
2. Junior High
3. High School
4. Junior College
5. College
6 Other

Is your school
a. Public
b. Private

Is your school
a. Urban
b. Suburban
c. Rural

c. Job content:

What subjects are you teaching?

How many classes do you teach?

How many students in each class?

Do you have any other responsibilities and/or activities in the school? Approximately how many hours per week do you spend on these?

What is your total income? (within these categories)

1 = below $6,000
2 = $6,000 - 9000
3 = $9,000 - 12,000
4 =$12,000 - 15,000
5 =$15,000 - 17,000
6 =$18,000 - 20,000
7 = Above $20,000
8 = No income
9 = Confidential, or refused to answer

What percent is from teaching?

Do you hold a part-time job? What is it?

Have you attended any conferences or conventions in the past year? How many?

Do you belong to a union or professional organization? Which ones?

Do you plan to stay in education as a permanent career?

Why?

Why not?

d. Have you had any other job in education previous to this one?

When?
Where?
What did you teach? (or if you did not teach, what was your title?)
Why did you leave that job?

Reasons:

1. Family responsibilities
2. Shift in interest
3. Frustration
4. Health
5. Salary
6. Military
7. Retired
8. Could not find job in my area of Education
9. Spouse made a geographic change
10. Other

B. Non-Education

a. What is the title of your job?
b. When did you start?
c. Where? (Name of company and location)
d. Where on this scale is your income?

1 = below $6,000
2 = $6,000 - 9,000
3 = $9,000 - 12,000
4 = $12,000 - 15,000
5 = $15,000 - 17,000
6 = $15,000 - 20,000
7 = Above $20,000
8 = No income
9 = Confidential, or refused to answer

e. Did you ever have a job in Education after you left Stanford?

When?
Where?
What was your title?
If teacher, what subject?

f. Why did you leave Education?

1. Family responsibilities
2. Shift in interest
3. Frustration
4. Health
5. Salary
6. Military
7. Retired
8. Could not find a job in my area of Education
9. Spouse made a geographic change
10. Other

g. Do you plan to back into Education? Why, or why not?
(write this in space for Permanent Career)

III. Family

1. Are you married?
2. Do you have children? What are their ages?
3. What is your spouse's occupation?

IV Evaluation of the Stanford Program

1. In light of your own personal experience in the Intern program, how would you rate the usefulness of each of these areas in preparing you to become a teacher or educator. Please rate them on a 1 to 5 scale, 1 not being useful at all, and 5 being extremely useful.

Scale

5—extremely useful
4—very useful
3—useful
2—somewhat useful
1—not useful at all
0—no response

a. Internship teaching experience
b. Required course work in education (i.e., Ed. Psych.; Sec. Ed.) Gen. ed
c. Elective course work in education (seminars)
d. Required course work in subject area
e. Elective course work in subject area
f. Resident supervising teacher's assistance
h. Curriculum practicum

2. How useful was the Stanford Teacher Education Program in training you to become a teacher or educator? (same scale)

3. How useful has the status of the Stanford degree been to you? (same scale)

V. Would you like us to send you the results of our survey?

(Local) Would you be willing to let someone from Stanford visit your classroom sometime in the future?

APPENDIX V

FREQUENCY TABLES FOR THE SELECTION OF R SCALE ITEMS

These tables contain the following:

1) the EOI item number,

2) the percentage of high- and low-rapport subjects in each response category,

3) the total number of respondents to each item,

4) the chi square computed for each item.
The chi square is based upon a 3x2 contingency table which was derived by combining the two extreme response categories ("strongly disagree" and "strongly agree") with their less extreme complements ("disagree" and "agree"). An asterisk indicates statistical significance ($p < .10$) and inclusion of the item in the scale.

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
1.	High	7.3	41.5	7.3	39.0	4.9	41	.84
	Low	7.3	31.7	7.3	46.3	7.3	41	
2.	High	2.4	11.9	21.4	42.9	21.4	42	1.15
	Low	2.4	19.5	24.4	36.6	17.1	41	
3.	High	11.9	31.0	11.9	33.3	11.9	42	4.87
	Low	7.1	21.4	31.0	40.5	0.0	42	
4.	High	4.9	17.1	31.7	29.3	17.1	41	6.01*
	Low	9.8	19.5	9.8	41.5	19.5	41	
5.	High	9.5	26.2	16.7	35.7	11.9	42	1.41
	Low	12.8	35.9	12.8	35.9	2.6	39	
6.	High	0.0	26.2	35.7	26.2	11.9	42	12.16*
	Low	7.3	34.1	4.9	39.0	14.6	41	
7.	High	65.0	30.0	0.0	2.5	2.5	40	5.53*
	Low	48.7	28.2	2.6	2.6	17.9	39	
8.	High	14.6	24.4	22.0	39.0	0.0	41	1.80
	Low	7.7	23.1	15.4	48.7	5.1	39	
9.	High	59.5	31.0	2.4	7.1	0.0	42	3.30
	Low	46.3	29.3	4.9	9.8	9.8	41	
10.	High	50.0	33.3	7.1	9.5	0.0	42	3.94
	Low	43.9	29.3	2.4	12.2	12.2	41	
11.	High	24.4	43.9	19.5	9.8	2.4	41	4.47
	Low	21.1	34.2	13.2	15.8	15.8	38	
12.	High	9.8	43.9	24.4	22.0	0.0	41	2.78
	Low	12.8	23.1	38.5	20.5	5.1	39	
13.	High	0.0	23.8	23.8	26.2	26.2	42	5.43*
	Low	5.4	29.7	5.4	43.2	16.2	37	
14.	High	2.4	14.3	23.8	38.1	21.4	42	5.36*
	Low	5.1	33.3	23.1	30.8	7.7	39	
15.	High	4.8	38.1	31.0	23.8	2.4	42	1.12
	Low	5.0	27.5	32.5	32.5	2.5	40	
16.	High	73.2	22.0	0.0	0.0	4.9	41	3.98
	Low	64.9	16.2	2.7	0.0	16.2	37	
17.	High	2.4	12.2	12.2	41.5	31.7	41	4.15
	Low	7.3	19.5	2.4	48.8	22.0	41	
18.	High	14.3	40.5	28.6	16.7	0.0	42	8.68*
	Low	10.3	35.9	10.3	41.0	2.6	39	
19.	High	5.0	20.0	17.5	45.0	12.5	40	1.17
	Low	2.6	15.4	12.8	56.4	12.8	39	
20.	High	2.4	29.3	26.8	34.1	7.3	41	2.06
	Low	2.9	40.0	14.3	34.3	8.6	35	
21.	High	5.0	30.0	15.0	32.5	17.5	40	1.23
	Low	8.1	37.8	16.2	24.3	13.5	37	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
22.	High	15.8	28.9	34.2	15.8	5.3	38	0.78
	Low	11.1	41.7	25.0	19.4	2.8	36	
23.	High	44.4	50.0	2.8	0.0	2.8	36	5.40*
	Low	35.1	40.5	5.4	13.5	5.4	37	
24.	High	0.0	5.1	12.8	41.0	41.0	39	6.69*
	Low	8.6	17.1	5.7	37.1	31.4	35	
25.	High	7.7	7.7	12.8	33.3	38.5	39	2.57
	Low	8.3	22.2	8.3	41.7	19.4	36	
26.	High	4.9	31.7	31.7	22.0	9.8	41	1.02
	Low	5.7	25.7	25.7	37.1	5.7	35	
27.	High	7.7	17.9	15.4	43.6	15.4	39	1.69
	Low	7.9	31.6	13.2	28.9	18.4	38	
28.	High	0.0	15.4	15.4	33.3	35.9	39	2.16
	Low	5.6	19.4	22.2	36.1	16.7	36	
29.	High	5.6	38.9	33.3	13.9	8.3	36	4.03
	Low	6.5	35.5	16.1	38.7	3.2	31	
30.	High	5.6	22.2	38.9	25.0	8.3	36	6.04*
	Low	12.5	43.8	28.1	9.4	6.2	32	
31.	High	0.0	11.8	17.6	41.2	29.4	34	0.26
	Low	0.0	16.1	16.1	48.4	19.4	31	
32.	High	2.8	33.3	5.6	50.0	8.3	36	4.87*
	Low	3.0	27.3	24.2	36.4	9.1	33	
33.	High	21.2	42.4	15.2	9.1	12.1	33	1.18
	Low	10.7	53.6	7.1	28.6	0.0	28	
34.	High	19.4	54.8	6.5	19.4	0.0	31	1.25
	Low	18.2	48.5	15.2	18.2	0.0	33	
35.	High	0.0	35.5	32.3	29.0	3.2	31	1.35
	Low	13.8	34.5	31.0	20.7	0.0	29	
36.	High	14.7	26.5	35.3	17.6	5.9	34	3.86
	Low	8.8	47.1	14.7	29.4	0.0	34	
37.	High	21.9	25.0	28.1	18.8	6.2	32	0.19
	Low	23.1	26.9	23.1	23.1	3.8	26	
38.	High	0.0	26.7	6.7	56.7	10.0	30	0.76
	Low	3.3	20.0	13.3	50.0	13.3	30	
39.	High	2.4	17.1	34.1	34.1	12.2	41	2.90
	Low	9.5	26.2	23.8	35.7	4.8	42	
40.	High	57.1	28.6	4.8	4.8	4.8	42	0.75
	Low	54.8	28.6	2.4	4.8	9.5	42	
41.	High	45.2	40.5	2.4	9.5	2.4	42	3.13
	Low	42.9	31.0	11.9	9.5	4.8	42	
42.	High	0.0	16.7	16.7	38.1	28.6	42	4.23
	Low	7.3	26.8	7.3	43.9	14.6	41	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
43.	High	54.8	31.0	7.1	0.0	7.1	42	1.93
	Low	47.6	31.0	4.8	9.5	7.1	42	
44.	High	2.4	16.7	14.3	40.5	26.2	42	0.08
	Low	7.1	9.5	14.3	54.8	14.3	42	
45.	High	38.1	35.7	9.5	16.7	0.0	42	3.08
	Low	22.0	34.1	12.2	22.0	9.8	41	
46.	High	40.5	40.5	11.9	7.1	0.0	42	8.99*
	Low	23.8	35.7	7.1	31.0	2.4	42	
47.	High	0.0	28.6	28.6	38.1	4.8	42	6.00*
	Low	16.7	31.0	33.3	16.7	2.4	42	
48.	High	35.7	50.0	4.8	4.8	4.8	42	1.57
	Low	40.5	35.7	4.8	7.1	11.9	42	
49.	High	14.3	28.6	14.3	35.7	7.1	42	1.50
	Low	28.6	14.3	23.8	16.7	16.7	42	
50.	High	4.8	11.9	33.3	35.7	14.3	42	2.94
	Low	12.2	17.1	19.5	39.0	12.2	41	
51.	High	0.0	26.2	31.0	35.7	7.1	42	7.49*
	Low	4.8	47.6	11.9	33.3	2.4	42	
52.	High	2.4	11.9	23.8	50.0	11.9	42	1.67
	Low	5.0	20.0	17.5	37.5	20.0	40	
53.	High	0.0	7.1	9.5	52.4	31.0	42	2.79
	Low	7.3	12.2	7.3	58.5	14.6	41	
54.	High	7.3	29.3	34.1	29.3	0.0	41	2.64
	Low	4.9	46.3	19.5	24.4	4.9	41	
55.	High	0.0	29.3	24.4	34.1	12.2	41	1.80
	Low	5.1	30.8	12.8	41.0	10.3	39	
56.	High	0.0	15.0	37.5	40.0	7.5	40	3.35
	Low	2.5	22.5	20.0	45.0	10.0	40	
57.	High	11.5	29.3	19.5	9.8	0.0	41	2.67
	Low	22.5	47.5	10.0	10.0	10.0	40	
58.	High	0.0	28.6	33.3	19.0	19.0	42	5.06*
	Low	5.3	13.2	18.4	52.6	10.5	38	
59.	High	2.4	7.1	11.9	40.5	38.1	42	3.47
	Low	9.8	7.3	2.4	36.6	43.9	41	
60.	High	30.0	45.0	15.0	7.5	2.5	40	2.16
	Low	31.7	34.1	12.2	17.1	4.9	41	
61.	High	4.9	22.0	31.7	29.3	12.2	41	2.14
	Low	7.3	34.1	22.0	31.7	4.9	41	
62.	High	4.9	7.3	7.3	39.0	41.5	41	1.74
	Low	10.0	10.0	2.5	47.5	30.0	40	
63.	High	71.8	17.9	0.0	2.6	7.7	39	0.09
	Low	50.0	35.0	0.0	0.0	15.0	40	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
64.	High	2.5	25.0	27.5	32.5	12.5	40	2.40
	Low	20.0	20.0	15.0	32.5	12.5	40	
65.	High	0.0	10.3	10.3	51.3	28.2	39	1.54
	Low	10.5	7.9	5.3	63.2	13.2	38	
66.	High	0.0	31.6	28.9	34.2	5.3	38	0.31
	Low	7.9	18.4	28.9	31.6	13.2	38	
67.	High	2.6	15.4	23.1	51.3	7.7	39	4.65*
	Low	2.6	36.8	13.2	34.2	13.2	38	
68.	High	60.0	22.5	2.5	5.0	10.0	40	0.03
	Low	48.6	32.4	2.7	8.1	8.1	37	
69.	High	8.1	10.8	10.8	43.2	27.0	37	0.13
	Low	5.6	13.9	8.3	55.6	16.7	36	
70.	High	4.9	4.9	7.3	39.0	43.9	41	2.45
	Low	14.3	7.1	9.5	28.6	40.5	42	
71.	High	7.9	21.1	52.6	13.2	5.3	38	7.69*
	Low	2.6	35.9	23.1	23.1	15.4	39	
72.	High	10.5	28.9	50.0	10.5	0.0	38	2.31
	Low	14.3	31.4	34.3	11.4	8.6	35	
73.	High	20.5	30.8	15.4	30.8	2.6	39	1.84
	Low	16.7	50.0	11.1	16.7	5.6	36	
74.	High	2.7	16.2	40.5	35.1	5.4	37	8.08*
	Low	5.4	43.2	18.9	32.4	0.0	37	
75.	High	8.1	35.1	13.5	35.1	8.1	37	0.70
	Low	20.0	20.0	8.6	45.7	5.7	35	
76.	High	0.0	12.5	20.0	52.5	15.0	40	0.73
	Low	5.6	13.9	16.7	52.8	11.1	36	
77.	High	0.0	9.5	11.9	54.8	23.8	42	4.01
	Low	7.1	16.7	16.7	45.2	14.3	42	
78.	High	14.3	50.0	21.4	14.3	0.0	42	3.62
	Low	14.3	33.3	21.4	26.2	4.8	42	
79.	High	2.4	19.0	33.3	26.2	19.0	42	4.21
	Low	19.0	21.4	19.0	38.1	2.4	42	
80.	High	40.5	38.1	7.1	11.9	2.4	42	0.28
	Low	33.3	45.2	4.8	11.9	4.8	42	
81.	High	2.4	7.1	11.9	50.0	28.6	42	5.88*
	Low	4.8	11.9	0.0	66.7	16.7	42	
82.	High	16.7	42.9	16.7	23.8	0.0	42	0.31
	Low	16.7	45.2	19.0	19.0	0.0	42	
83.	High	11.9	38.1	28.6	14.3	7.1	42	0.38
	Low	9.5	40.5	23.8	23.8	2.4	42	
84.	High	7.1	45.2	11.9	28.6	7.1	42	5.32*
	Low	4.8	23.8	23.8	35.7	11.9	42	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
85.	High	2.4	19.0	11.9	42.9	23.8	42	0.94
	Low	4.8	23.8	7.1	54.8	9.5	42	
86.	High	57.1	35.7	0.0	2.4	4.8	42	4.96*
	Low	42.9	33.3	4.8	2.4	16.7	42	
87.	High	16.7	57.1	9.5	16.7	0.0	42	0.51
	Low	19.0	47.6	11.9	16.7	4.8	42	
88.	High	7.1	19.0	57.1	11.9	4.8	42	2.55
	Low	9.5	31.0	40.5	16.7	2.4	42	
89.	High	9.5	38.1	11.9	33.3	7.1	42	1.59
	Low	9.5	28.6	21.4	38.1	2.4	42	
90.	High	9.5	23.8	35.7	23.8	7.1	42	0.96
	Low	11.9	23.8	26.2	31.0	7.1	42	
91.	High	7.3	26.8	22.0	41.5	2.4	41	0.91
	Low	2.4	38.1	14.3	33.3	11.9	42	
92.	High	0.0	19.0	21.4	42.9	16.7	42	3.08
	Low	9.5	26.2	14.3	38.1	11.9	42	
93.	High	4.8	33.3	19.0	31.0	11.9	42	1.10
	Low	4.8	31.0	28.6	35.7	0.0	42	
94.	High	21.4	47.6	16.7	11.9	2.4	42	3.21
	Low	23.8	52.4	4.8	19.0	0.0	42	
95.	High	4.9	4.9	7.3	31.7	51.2	41	3.28
	Low	14.3	9.5	9.5	33.3	33.3	42	
96.	High	28.6	50.0	11.9	7.1	2.4	42	5.20*
	Low	12.2	48.8	9.8	26.8	2.4	41	
97.	High	0.0	14.6	26.8	36.6	22.0	41	5.50*
	Low	9.8	26.8	24.4	36.6	2.4	41	
98.	High	0.0	16.7	19.0	45.2	19.0	42	4.54
	Low	9.8	22.0	26.8	36.6	4.9	41	
99.	High	11.9	42.9	31.0	11.9	2.4	42	2.55
	Low	7.1	38.1	26.2	26.2	2.4	42	
100.	High	0.0	14.3	7.1	61.9	16.7	42	8.03*
	Low	2.4	34.1	14.6	48.8	0.0	41	
101.	High	24.4	51.2	7.3	17.1	0.0	41	0.81
	Low	19.0	47.6	9.5	21.4	2.4	42	
102.	High	7.5	20.0	47.5	15.0	10.0	40	3.91
	Low	5.3	28.9	26.3	34.2	5.3	38	
103.	High	2.5	27.5	15.0	50.0	5.0	40	0.16
	Low	0.0	30.8	17.9	38.5	12.8	39	
104.	High	7.3	26.8	12.2	48.8	4.9	41	2.19
	Low	2.5	47.5	7.5	40.0	2.5	40	
105.	High	7.1	0.0	0.0	50.0	42.9	42	1.79
	Low	9.8	9.8	0.0	43.9	36.6	41	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
106.	High	2.4	14.3	23.8	45.2	14.3	42	0.42
	Low	0.0	17.9	17.9	46.2	17.9	39	
107.	High	2.5	47.5	20.0	27.5	2.5	40	0.23
	Low	5.6	38.9	22.2	25.0	8.3	36	
108.	High	33.3	53.8	2.6	7.7	2.6	39	3.20
	Low	29.7	45.9	13.5	5.4	5.4	37	
109.	High	7.3	14.6	41.5	31.7	4.9	41	0.27
	Low	5.6	16.7	36.1	27.8	13.9	36	
110.	High	4.9	34.1	31.7	19.5	9.8	41	1.90
	Low	10.8	40.5	18.9	27.0	2.7	37	
111.	High	14.6	53.7	14.6	12.2	4.9	41	0.21
	Low	13.2	52.6	13.2	18.4	2.6	38	
112.	High	2.6	34.2	23.7	34.2	5.3	38	1.24
	Low	8.3	38.9	25.0	27.8	0.0	36	
113.	High	12.5	35.0	12.5	35.0	5.0	40	1.15
	Low	2.6	35.9	20.5	41.0	0.0	39	
114.	High	9.5	28.6	28.6	31.0	2.4	42	2.40
	Low	4.8	23.8	21.4	50.0	0.0	42	
115.	High	23.8	45.2	11.9	16.7	2.4	42	5.93*
	Low	9.5	33.3	19.0	35.7	2.4	42	
116.	High	2.4	7.1	26.2	50.0	14.3	42	5.84*
	Low	9.5	19.0	28.6	38.1	4.8	42	
117.	High	9.5	38.1	23.8	21.4	7.1	42	1.21
	Low	11.9	47.6	19.0	19.0	2.4	42	
118.	High	16.7	35.7	31.0	16.7	0.0	42	2.62
	Low	9.5	38.1	21.4	28.6	2.4	42	
119.	High	2.4	19.0	42.9	31.0	4.8	42	0.90
	Low	2.4	21.4	50.0	19.0	7.1	42	
120.	High	4.8	23.8	31.0	31.0	9.5	42	4.15
	Low	2.4	23.8	14.3	47.6	11.9	42	
121.	High	7.1	9.5	9.5	38.1	35.7	42	2.07
	Low	4.8	16.7	2.4	47.6	28.6	42	
122.	High	0.0	38.1	28.6	23.8	9.5	42	0.00
	Low	9.5	28.6	28.6	31.0	2.4	42	
123.	High	11.9	59.5	9.5	14.3	4.8	42	0.88
	Low	16.7	61.9	4.8	16.7	0.0	42	
124.	High	9.5	16.7	28.6	40.5	4.8	42	3.59
	Low	12.2	24.4	12.2	39.0	12.2	41	
125.	High	4.8	9.5	9.5	54.8	21.4	42	4.49
	Low	9.5	23.8	4.8	50.0	11.9	42	
126.	High	59.5	33.3	0.0	0.0	7.1	42	2.33
	Low	36.6	46.3	2.4	4.9	9.8	41	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
127.	High	0.0	9.5	16.7	47.6	26.2	42	5.37*
	Low	4.8	19.0	4.8	54.8	16.7	42	
128.	High	0.0	11.9	14.3	59.5	14.3	42	0.84
	Low	2.4	16.7	14.3	52.4	14.3	42	
129.	High	2.4	4.8	9.5	61.9	21.4	42	3.45
	Low	4.8	14.3	14.3	59.5	7.1	42	
130.	High	9.8	58.5	22.0	9.8	0.0	41	0.76
	Low	7.1	52.4	26.2	9.5	4.8	42	
131.	High	2.4	4.8	4.8	64.3	23.8	42	2.83
	Low	9.5	9.5	2.4	47.6	31.0	42	
132.	High	17.1	46.3	31.7	4.9	0.0	41	3.94
	Low	9.5	45.2	26.2	19.0	0.0	42	
133.	High	7.1	23.8	21.4	38.1	9.5	42	3.40
	Low	7.1	31.0	33.3	26.2	2.4	42	
134.	High	34.1	48.8	2.4	7.3	7.3	41	1.08
	Low	31.7	51.2	0.0	17.1	0.0	41	
135.	High	17.1	48.8	24.4	4.9	4.9	41	4.23
	Low	11.9	52.4	11.9	21.4	2.4	42	
136.	High	11.9	35.7	28.6	21.4	2.4	42	1.06
	Low	14.3	40.5	19.0	23.8	2.4	42	
137.	High	7.1	33.3	7.1	45.2	7.1	42	2.97
	Low	7.1	19.0	16.7	54.8	2.4	42	
138.	High	0.0	14.6	34.1	43.9	7.3	41	3.41
	Low	2.5	22.5	17.5	47.5	10.0	40	
139.	High	0.0	27.5	37.5	30.0	5.0	40	6.81*
	Low	4.9	51.2	22.0	17.1	4.9	41	
140.	High	0.0	12.2	19.5	56.1	12.2	41	1.69
	Low	2.4	19.5	22.0	48.8	7.3	41	
141.	High	14.6	51.2	22.0	7.3	4.9	41	2.76
	Low	31.0	40.5	9.5	19.0	0.0	42	
142.	High	0.0	19.5	12.2	53.7	14.6	41	8.83*
	Low	9.5	31.0	23.8	35.7	0.0	42	
143.	High	0.0	5.0	35.0	55.0	5.0	40	6.50*
	Low	0.0	24.4	22.0	48.8	4.9	41	
144.	High	0.0	12.5	20.0	57.5	10.0	40	7.03*
	Low	2.6	33.3	7.7	51.3	5.1	39	
145.	High	15.0	57.5	15.0	10.0	2.5	40	2.91
	Low	10.3	56.4	28.2	5.1	0.0	39	
146.	High	0.0	11.9	19.0	54.8	14.3	42	6.93*
	Low	7.3	29.3	14.6	41.5	7.3	41	
147.	High	5.0	12.5	32.5	42.5	7.5	40	0.99
	Low	2.8	16.7	41.7	33.3	5.6	36	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
148.	High	10.0	37.5	25.0	25.0	2.5	40	0.36
	Low	5.4	45.9	27.0	16.2	5.4	37	
149.	High	45.0	32.5	12.5	5.0	5.0	40	2.48
	Low	29.3	41.5	7.3	22.0	0.0	41	
150.	High	5.0	5.0	7.5	35.0	47.5	40	1.78
	Low	10.3	10.3	5.1	41.0	33.3	39	
151.	High	11.9	40.5	19.0	23.8	4.8	42	1.07
	Low	5.0	37.5	27.5	22.5	7.5	40	
152.	High	0.0	29.3	2.2	41.5	17.1	41	0.13
	Low	4.9	24.4	9.8	43.9	17.1	41	
153.	High	9.8	24.4	53.7	7.3	4.9	41	3.27
	Low	7.3	43.9	34.1	12.2	2.4	41	
154.	High	14.6	53.7	19.5	9.8	2.4	41	1.89
	Low	7.1	52.4	16.7	19.0	4.8	42	
155.	High	0.0	36.6	19.5	36.6	7.3	41	0.79
	Low	2.6	25.6	25.6	41.0	5.1	39	
156.	High	14.3	45.2	14.3	16.7	9.5	42	0.30
	Low	9.8	43.9	17.1	26.8	2.4	41	
157.	High	0.0	24.4	22.0	46.3	7.3	41	0.31
	Low	2.5	25.0	25.0	35.0	12.5	40	
158.	High	2.4	26.2	23.8	47.6	0.0	42	0.35
	Low	0.0	26.8	19.5	53.7	0.0	41	
159.	High	0.0	36.6	24.4	34.1	4.9	41	0.99
	Low	4.9	34.1	31.7	26.8	2.4	41	
160.	High	2.4	14.6	7.3	63.4	12.2	41	5.69*
	Low	2.5	32.5	15.0	47.5	2.5	40	
161.	High	20.0	47.5	15.0	15.0	2.5	40	5.13*
	Low	7.9	36.8	15.8	38.5	0.0	38	
162.	High	30.0	32.5	20.0	12.5	5.0	40	1.57
	Low	18.9	56.8	13.5	10.8	0.0	40	
163.	High	2.5	27.5	15.0	40.0	15.0	40	7.19*
	Low	12.2	43.9	17.1	24.4	2.4	41	
164.	High	17.1	53.7	12.2	14.6	2.4	41	7.57*
	Low	10.8	28.2	17.9	38.5	2.6	39	
165.	High	10.3	59.0	7.7	20.5	2.6	39	0.61
	Low	12.8	48.7	7.7	28.2	2.6	39	
166.	High	13.5	8.1	48.6	27.0	2.7	37	10.01*
	Low	13.5	35.1	16.2	32.4	2.7	37	
167.	High	30.8	53.8	5.1	7.7	2.6	39	1.30
	Low	27.8	47.2	5.6	19.4	0.0	36	
168.	High	0.0	5.1	15.4	48.7	30.8	39	0.81
	Low	2.6	7.9	15.8	47.4	26.3	38	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
169.	High	7.7	38.5	20.5	23.1	10.3	39	4.14
	Low	15.4	38.5	5.1	33.3	7.7	39	
170.	High	0.0	5.3	7.9	52.6	34.2	38	5.05*
	Low	5.4	10.8	0.0	62.2	21.6	37	
171.	High	55.0	35.0	2.5	5.0	2.5	40	2.76
	Low	46.9	34.4	0.0	3.1	15.6	32	
172.	High	36.1	44.4	13.9	5.6	0.0	36	2.01
	Low	17.6	50.0	17.6	8.8	5.9	34	
173.	High	63.9	27.8	0.0	2.8	5.6	36	0.43
	Low	43.3	40.0	0.0	6.7	10.0	30	
174.	High	2.6	17.9	28.2	48.7	2.6	39	0.24
	Low	2.9	20.6	23.5	47.1	5.9	34	
175.	High	20.6	44.1	17.6	11.8	5.9	34	0.86
	Low	25.8	45.2	9.7	9.7	9.7	31	
176.	High	19.4	41.9	12.9	25.8	0.0	31	3.35
	Low	41.2	38.2	2.9	14.7	2.9	34	
177.	High	35.3	47.1	2.9	14.7	0.0	34	3.72
	Low	29.4	35.3	14.7	14.7	5.9	34	
178.	High	7.9	42.1	21.1	26.3	2.6	38	0.09
	Low	8.8	41.2	23.5	23.5	2.9	34	
179.	High	53.6	32.1	3.6	7.1	3.6	28	0.48
	Low	48.3	31.0	6.9	10.3	3.4	29	
180.	High	19.4	38.7	19.4	19.4	3.2	31	3.12
	Low	28.1	50.0	12.5	9.4	0.0	32	
181.	High	0.0	12.1	24.2	45.5	18.2	33	2.20
	Low	3.2	22.6	16.1	54.8	3.2	31	
182.	High	34.5	48.3	3.4	6.9	6.9	29	0.83
	Low	27.3	51.5	9.1	9.1	3.0	33	
183.	High	12.9	16.1	58.1	12.9	0.0	31	1.73
	Low	7.4	33.3	40.7	14.8	3.7	27	
184.	High	3.4	37.9	34.5	24.1	0.0	29	2.08
	Low	0.0	42.3	19.2	34.6	3.8	26	
185.	High	25.8	53.1	12.5	9.4	0.0	32	2.54
	Low	12.1	48.5	18.2	15.2	6.1	33	
186.	High	5.7	20.0	28.6	45.7	0.0	35	2.43
	Low	6.7	30.0	13.3	50.0	0.0	30	
187.	High	3.4	27.6	17.2	51.7	0.0	29	1.34
	Low	7.1	10.7	21.4	60.7	0.0	28	
188.	High	19.2	61.5	15.4	3.8	0.0	26	5.77*
	Low	14.8	37.0	25.9	18.5	3.7	27	
189.	High	15.0	45.0	32.5	7.5	0.0	40	1.64
	Low	9.5	42.9	31.0	14.3	2.4	42	

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Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
190.	High	7.1	50.0	21.4	21.4	0.0	42	5.62*
	Low	2.4	31.7	22.0	41.5	2.4	41	
191.	High	0.0	9.5	14.3	59.5	16.7	42	1.68
	Low	4.9	14.6	12.2	58.5	9.8	41	
192.	High	0.0	7.3	7.3	65.9	19.5	41	2.60
	Low	9.5	7.1	2.4	59.5	21.4	42	
193.	High	2.4	4.8	2.4	64.3	26.2	42	10.39*
	Low	9.8	9.8	19.5	43.9	17.1	41	
194.	High	2.4	31.7	46.3	14.6	4.9	41	2.59
	Low	9.8	41.5	31.7	17.1	0.0	41	
195.	High	2.4	47.6	14.3	23.8	11.9	42	0.97
	Low	9.5	35.7	9.5	26.2	19.0	42	
196.	High	11.9	52.4	28.6	7.1	0.0	42	1.20
	Low	7.1	54.8	23.8	14.3	0.0	42	
197.	High	2.4	46.3	22.0	26.8	2.4	41	0.26
	Low	0.0	51.2	24.4	24.4	0.0	41	
198.	High	0.0	9.8	39.0	41.5	9.8	41	3.81
	Low	4.8	21.4	33.3	35.7	4.8	42	
199.	High	31.7	51.2	9.8	4.9	2.4	41	2.77
	Low	23.8	45.2	11.9	9.5	9.5	42	
200.	High	7.3	46.3	17.1	24.4	4.9	41	0.37
	Low	14.3	33.3	21.4	23.8	7.1	42	
201.	High	17.5	30.0	17.5	25.0	10.0	40	1.19
	Low	9.8	31.7	12.2	34.1	12.2	41	
202.	High	30.0	57.5	5.0	7.5	0.0	40	3.54
	Low	21.4	50.0	7.1	16.7	4.8	42	
203.	High	53.8	30.8	7.7	2.6	5.1	39	2.51
	Low	40.5	40.5	2.4	9.5	7.1	42	
204.	High	2.6	7.9	28.9	44.7	15.8	38	10.65*
	Low	7.7	33.3	28.2	25.6	5.1	39	
205.	High	2.4	7.3	7.3	56.1	26.8	41	2.27
	Low	2.6	15.8	13.2	42.1	26.3	38	
206.	High	0.0	9.8	9.8	58.5	22.0	41	1.06
	Low	2.5	15.0	10.0	57.5	15.0	40	
207.	High	0.0	23.1	38.5	30.8	7.7	39	2.15
	Low	5.6	30.6	25.0	33.3	5.6	36	
208.	High	10.3	64.1	12.8	10.3	2.6	39	1.29
	Low	10.0	55.0	22.5	10.0	2.5	40	
209.	High	20.5	41.0	23.1	15.4	0.0	39	2.89
	Low	16.7	44.4	11.1	22.2	5.6	36	
210.	High	31.6	50.0	13.2	5.3	0.0	38	3.25
	Low	27.5	47.5	7.5	10.0	7.5	40	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X^2
211.	High	0.0	5.4	8.1	54.1	32.4	37	5.91*
	Low	7.7	17.9	5.1	48.7	20.5	39	
212.	High	0.0	20.5	35.9	33.3	10.3	39	0.91
	Low	0.0	29.7	29.7	32.4	8.1	37	
213.	High	51.4	40.5	0.0	5.4	2.7	37	1.90
	Low	41.5	36.6	0.0	14.6	7.3	41	
214.	High	17.9	38.5	35.9	7.7	0.0	39	1.27
	Low	36.6	29.3	24.4	9.8	0.0	41	
215.	High	5.0	12.5	40.0	37.5	5.0	40	1.54
	Low	2.6	26.3	31.6	31.6	7.9	38	
216.	High	2.8	25.0	33.3	30.6	8.3	36	2.36
	Low	5.4	21.6	18.9	43.2	10.8	37	
217.	High	0.0	40.0	40.0	17.1	2.9	35	3.58
	Low	2.7	27.0	29.7	35.1	5.4	37	
218.	High	23.1	66.7	2.6	7.7	0.0	39	1.28
	Low	13.9	66.7	5.6	5.6	8.3	36	
219.	High	0.0	20.6	52.9	26.5	0.0	34	0.93
	Low	2.7	27.0	43.2	24.3	2.7	37	
220.	High	3.0	27.3	27.3	36.4	6.1	33	5.21*
	Low	10.5	44.7	23.7	21.1	0.0	38	
221.	High	0.0	23.5	14.7	52.9	8.8	34	1.10
	Low	3.0	21.2	24.2	42.4	9.1	33	
222.	High	0.0	15.2	15.2	63.6	6.1	33	0.63
	Low	6.1	12.1	21.2	48.5	12.1	33	
223.	High	6.2	31.3	18.8	43.8	0.0	32	0.36
	Low	5.9	38.2	14.7	38.2	2.9	34	
224.	High	9.4	34.4	31.3	25.0	0.0	32	5.78*
	Low	8.6	42.9	8.6	40.0	0.0	35	
225.	High	12.1	54.5	27.3	6.1	0.0	33	2.87
	Low	16.7	36.7	26.7	20.0	0.0	30	
226.	High	36.4	51.5	6.1	3.0	3.0	33	0.74
	Low	33.3	48.5	6.1	12.1	0.0	33	
227.	High	27.5	50.0	12.5	7.5	2.5	40	2.95
	Low	17.1	48.8	9.8	19.5	4.9	41	
228.	High	2.5	27.5	2.5	57.5	10.0	40	6.60*
	Low	0.0	33.3	19.0	42.9	4.8	42	
229.	High	35.0	50.0	10.0	2.5	2.5	40	6.27*
	Low	21.4	54.8	2.4	14.3	7.1	42	
230.	High	5.0	0.0	0.0	42.5	52.5	40	8.23*
	Low	4.8	19.0	4.8	45.2	26.2	42	
231.	High	0.0	2.5	10.0	65.0	22.5	40	8.02*
	Low	7.1	16.7	7.1	50.0	19.0	42	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X^2
232.	High	5.0	30.0	37.5	27.5	0.0	40	0.93
	Low	2.4	33.3	28.6	35.7	0.0	42	
233.	High	10.3	43.6	30.8	15.4	0.0	39	0.21
	Low	4.8	52.4	26.2	16.7	0.0	42	
234.	High	22.5	57.5	7.5	10.0	2.5	40	1.29
	Low	14.3	54.8	11.9	16.7	2.4	42	
235.	High	5.0	40.0	22.5	22.5	10.0	40	2.97
	Low	2.4	31.7	14.6	39.0	12.2	41	
236.	High	12.5	50.0	25.0	12.5	0.0	40	3.70
	Low	9.5	35.7	26.2	28.6	0.0	42	
237.	High	17.5	47.5	12.5	22.5	0.0	40	2.36
	Low	9.8	39.0	14.6	26.8	9.8	41	
238.	High	17.9	51.3	20.5	10.3	0.0	39	14.24*
	Low	4.8	40.5	7.1	42.9	4.8	42	
239.	High	0.0	12.5	10.0	40.0	37.5	40	0.46
	Low	2.4	14.6	7.3	48.8	26.8	41	
240.	High	40.0	52.5	2.5	2.5	2.5	40	3.53
	Low	22.5	55.0	7.5	12.5	2.5	40	
241.	High	0.0	10.3	30.8	56.4	2.6	39	6.86*
	Low	9.8	17.1	41.5	24.4	7.3	41	
242.	High	5.1	64.1	12.8	17.9	0.0	39	0.43
	Low	7.7	59.0	17.9	12.8	2.6	39	
243.	High	25.0	60.0	7.5	0.0	7.5	40	3.58
	Low	30.0	40.0	7.5	15.0	7.5	40	
244.	High	0.0	20.0	27.5	45.0	7.5	40	1.19
	Low	4.8	9.5	38.1	35.7	11.9	42	
245.	High	10.3	53.8	17.9	15.4	2.6	39	0.01
	Low	17.5	47.5	17.5	12.5	5.0	40	
246.	High	61.5	33.3	0.0	2.6	2.6	39	2.58
	Low	48.8	31.7	0.0	7.3	12.2	41	
247.	High	10.3	30.8	20.5	25.6	12.8	39	0.77
	Low	12.5	37.5	20.0	27.5	2.5	40	
248.	High	13.2	44.7	23.7	18.4	0.0	38	0.36
	Low	12.2	39.0	26.8	22.0	0.0	41	
249.	High	2.7	18.2	32.4	35.1	13.5	37	4.06
	Low	9.8	26.8	17.1	34.1	12.2	41	
250.	High	17.5	55.0	15.0	10.0	2.5	40	0.32
	Low	7.7	53.0	17.9	7.7	7.7	39	
251.	High	0.0	7.7	12.8	66.7	12.8	39	2.40
	Low	4.9	14.6	9.8	58.5	12.2	41	
252.	High	2.7	18.1	24.3	48.6	16.2	37	3.04
	Low	5.1	17.9	12.8	43.6	20.5	39	

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
253. High	5.1	51.3	20.5	20.5	2.6	39	0.64
Low	17.5	47.5	17.5	15.0	2.5	40	
254. High	7.7	7.7	61.5	23.1	0.0	39	7.08*
Low	7.9	23.7	31.6	34.2	2.6	38	
255. High	0.0	23.1	20.5	51.3	5.1	39	1.77
Low	11.4	22.9	11.4	45.7	8.6	35	
256. High	13.2	56.8	10.8	16.2	0.0	37	2.66
Low	8.3	50.0	25.0	13.9	2.8	36	
257. High	40.5	45.9	5.4	5.4	2.7	37	2.41
Low	34.1	43.9	2.4	12.2	7.3	41	
258. High	37.8	54.1	2.7	5.4	0.0	37	5.96*
Low	27.0	44.4	8.3	11.1	11.1	36	
259. High	16.4	61.1	8.3	5.6	5.6	36	3.57
Low	13.2	47.4	18.4	10.5	10.5	38	
260. High	10.3	46.2	23.1	15.4	5.1	39	0.21
Low	18.2	33.3	27.3	12.1	9.1	33	
261. High	0.0	18.4	26.3	47.4	7.9	38	2.87
Low	11.1	8.3	11.1	52.8	16.7	36	
262. High	0.0	13.2	21.1	57.9	7.9	38	1.07
Low	3.1	18.8	15.6	56.3	6.2	32	
263. High	5.4	40.5	32.4	21.6	0.0	37	0.16
Low	2.9	38.2	35.3	23.5	0.0	34	
264. High	0.0	5.0	7.5	42.5	45.0	40	5.11*
Low	9.5	11.9	9.5	40.5	28.6	42	
265. High	50.0	45.0	0.0	0.0	5.0	40	2.58
Low	31.0	50.0	0.0	9.5	9.5	42	
266. High	22.5	52.5	12.5	10.0	2.5	40	5.17*
Low	21.4	38.1	7.1	19.0	14.3	42	
267. High	12.5	55.0	22.5	10.0	0.0	40	11.52*
Low	2.4	50.0	7.1	33.3	7.1	42	
268. High	0.0	25.6	17.9	41.0	15.4	39	1.27
Low	2.4	23.8	9.5	52.4	11.9	42	
269. High	2.5	37.5	27.5	25.0	7.5	40	2.81
Low	7.1	40.5	35.7	14.3	2.4	42	
270. High	0.0	30.0	52.5	15.0	2.5	40	1.42
Low	4.8	28.6	40.5	23.8	2.4	42	
271. High	5.1	38.5	48.7	5.1	2.6	39	11.06*
Low	7.1	28.6	26.2	33.3	4.8	42	
272. High	5.0	42.5	17.5	30.0	5.0	40	1.22
Low	10.0	40.0	25.0	25.0	0.0	40	
273. High	12.5	60.0	12.5	10.0	5.0	40	2.48
Low	9.8	46.3	17.1	26.8	0.0	41	

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
274. High	2.5	22.5	5.0	52.5	17.5	40	1.64
Low	9.5	28.6	4.8	50.0	7.1	42	
275. High	12.5	32.5	40.0	12.5	2.5	40	2.45
Low	21.4	26.2	26.2	26.2	0.0	42	
276. High	27.5	57.5	10.0	2.5	2.5	40	3.80
Low	35.7	35.7	9.5	14.3	4.8	42	
277. High	25.0	52.5	17.5	0.0	5.0	40	6.83*
Low	19.0	33.3	26.2	19.0	2.4	42	
278. High	2.5	42.5	35.0	20.0	0.0	40	5.06*
Low	12.2	39.0	14.6	31.7	2.4	41	
279. High	0.0	17.5	17.5	55.0	10.0	40	1.64
Low	12.2	17.1	17.1	29.3	24.4	41	
280. High	37.5	52.5	5.0	2.5	2.5	40	4.78*
Low	26.2	47.6	4.8	11.9	9.5	42	
281. High	2.6	2.6	2.6	66.7	25.6	39	3.69
Low	4.8	11.9	0.0	57.1	26.2	42	
282. High	2.6	23.1	25.6	41.0	7.7	39	0.97
Low	7.1	28.6	21.4	35.7	7.1	42	
283. High	0.0	23.1	23.1	41.0	12.8	39	0.46
Low	5.0	12.5	27.5	42.5	12.5	40	
284. High	10.0	57.5	27.5	5.0	0.0	40	3.33
Low	15.0	47.5	20.0	17.5	0.0	40	
285. High	7.5	37.5	40.0	15.0	0.0	40	5.83*
Low	7.3	34.1	22.0	34.1	2.4	41	
286. High	7.5	35.0	25.0	32.5	0.0	40	3.27
Low	2.5	27.5	17.5	52.5	0.0	40	
287. High	41.0	51.3	0.0	5.1	2.6	39	4.60
Low	31.7	43.9	4.9	7.3	12.2	41	
288. High	39.5	55.3	0.0	5.3	0.0	38	4.14
Low	25.6	53.8	2.6	10.3	7.7	39	
289. High	13.5	32.4	43.2	10.8	0.0	37	4.15
Low	14.6	24.4	31.7	26.8	2.4	41	
290. High	0.0	7.9	15.8	65.8	10.5	38	9.34*
Low	4.9	24.4	26.8	43.9	0.0	41	
291. High	2.5	32.5	30.0	27.5	7.5	40	0.88
Low	5.3	36.8	21.1	31.6	5.3	38	
292. High	20.5	41.0	25.6	10.3	2.6	39	3.23
Low	16.2	51.4	10.8	21.6	0.0	37	
293. High	2.7	5.4	10.8	56.8	24.3	37	2.09
Low	7.3	12.2	9.8	51.2	19.5	41	
294. High	5.3	28.9	36.8	26.3	2.6	38	0.43
Low	10.8	27.0	29.7	29.7	2.7	37	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X2
295.	High	16.2	56.8	21.6	5.4	0.0	37	5.06*
	Low	13.8	57.9	7.9	15.8	2.6	38	
296.	High	5.0	7.5	7.5	65.0	15.0	40	0.40
	Low	2.5	15.0	7.5	62.5	12.5	40	
297.	High	18.4	47.4	15.8	18.4	0.0	38	0.40
	Low	7.7	51.3	17.9	20.5	2.6	39	
298.	High	18.2	42.4	24.2	12.1	3.0	33	0.60
	Low	12.2	41.5	24.4	19.5	2.4	41	
299.	High	16.7	50.0	16.7	16.7	0.0	36	0.01
	Low	10.8	56.8	16.2	16.2	0.0	37	
300.	High	21.1	50.0	18.4	10.5	0.0	38	0.97
	Low	7.9	52.6	23.7	15.8	0.0	38	

N45

APPENDIX VI

THE R SCALE

R Scale Items

4. The secondary school should not be permitted to graduate students until they have developed adequate proficiency in English and mathematics.

6. Careful planning on the part of the teacher will produce an unusual sense of purpose in the students.

7. Well-chosen textbooks generally present most, say 90 per cent, of the things that students need to know about a subject, and therefore the use of materials other than textbooks is unimportant.

13. Learning should hardly ever be a matter of the students' memorizing content assigned by the teacher so that they can give it back upon demand.

14. The best way to evaluate learning is to avoid grades and instead use descriptive sentences and phrases which describe in full the character of the student's progress in school.

18. A teacher should make almost all the decisions about what students are to learn and how they are to learn it.

23. A teacher should teach the prescribed course of study and hardly ever change it.

24. At the undergraduate level, the education of the future teacher should be an education in the liberal arts and sciences.

30. Students can learn mathematics as well as any other subject.

32. A teacher should consciously use fairly difficult words quite often so that students may become familiar with them.

46. Whether or not students are happy in the classroom is much less important than whether or not they are learning what they should be learning.

47. The teacher's personality is far more important to student learning than the methods used to teach subject matter.

51. Students ought to be given a great deal of initiative in deciding what they are to learn and how they are to learn it.

58. Without proper training, students' mental abilities will remain undeveloped.

67. Students will think for themselves if permitted.

71. When a student makes an error in his spoken English, it is usually best to correct him immediately.

74. The student's learning is affected more by the teacher's personality characteristics than it is by the teacher's instrictional procedures.

81. A good teacher is one who is careful to avoid doing the students' work for them.

84. Teachers should talk to students just as they would to any adult.

86. It is a waste of time to allow students to discuss school subjects among themselves.

96. Textbooks should be the primary focus of most of the teaching-learning activity in the classroom.

97. A student's classroom assignments should be determined by his interests and abilities.

100. If the material for study is not made interesting for students they will not think, or learn to think, at all.

115. Strong emphasis should be put on mastery of subject matter and memorization of facts as legitimate and desirable ends in education.

116. A very important function of education is to see to it that students acquire the knowledge basic to a satisfying family life.

127. Before it starts work, a class should be given a summary of the ground it will cover.

139. It is best to let students work to themselves on the basis of their particular interests and abilities.

142. Instead of making one-assignment-for-all, a teacher should present the class with several alternate assignments and allow the pupils to choose the ones that best suit their needs.

143. A teacher should discourage students from moving arould the room freely.

144. One should expect students to forget much that is told them.

146. It is only fair to require more of abler students than of the less able.

160. Unless the student sees why it is good for him to work on a problem, any work he actually does on it is likely to be done primarily to keep the teacher from bothering him.

161. The old saying, "practice makes perfect," is after all a rather complete summary of what determines learning.

163. A teacher should have something good to say about almost every piece of work a student does.

164. It is only fair to require about the same amount of work from all students.

166. The best way to teach writing emphasizes having the students learn the parts (such as sentences and paragraphs) separately and then coordinate these parts into the whole.

170. Students need to be taught how to learn effectively.

188. Teachers should make it a point to be wrong occasionally and then acknowledge the fact that they had made a mistake.

190. A teacher's job is primarily one of teaching and explaining subject matter.

193. Learning the processes involved in identifying problems that are worth tackling should be considered a paramount goal for both teachers and learners.

204. Homogenous grouping of students by class (such as advanced classes, slow classes, etc.) is the most practical solution to the tremendous range of abilities found in students.

211. Teaching techniques must be adapted to the needs and abilities of individual students.

220. The personality of the teacheris the most important of his or pedagogical qualifications.

224. Often the best way to get students to learn things is to assign some reading and tell them they will be tested on it.

228. Typically, texts or courses of study should only be thought of as helps, not requirements, in teaching a subject.

229. Good teaching and general affection for students are two separate things that have little if anything to do with each other.

230. A teacher should attempt to keep students' attention by being interesting rather than by asking for attention outright.

231. Although it is a play on words, there is a lot of truth in the statement that "Teachers should teach students rather than subjects."

238. The teacher should be primarily concerned wuth the student's mastery of subject matter.

241. A philosophy for teaching is the most practical and useful possession a busy teacher can have.

254. In promoting learnings of the skill or practice type, teachers should let students begin with crude "wholes" and then gradually improve the "parts" through practice.

258. No attempt to "make learning relevant" will bridge the gap between the classroom and the uninterested student.

264. Teachers should be expected to spend some of their free time with students if it will help them learn.

266. It is unrealistic to believe that teaching should enable students to get along without their teacher.

267. Good teaching requires a great deal of talking on the part of the teacher.

271. Giving students rational insight into the nature of the number system will not appreciably reduce the amount of drill necessary in the teaching of mathematics.

277. One good, long session on a particular learning activity is worth much more than the same amount of time spread out over several sessions.

278. Calling attention to the accomplishments of others has little value in stimulating achievement.

280. Tests should primarily require students to remember things rather that to make judgements and manipulate relationships.

285. If instruction is clear and systematic, there will be few occasions for disorder or cases of discipline.

290. Teacher and students should share in formulating objectives.

295. Keeping students informed of their progress has little effect on learning.

APPENDIX VII

SCORING KEY FOR THE R SCALE

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
4	0	0	+1	-1	-1
6	-1	-1	+1	-1	-1
7	+1	+1	0	-1	-1
13	-1	-1	+1	0	0
14	-1	-1	0	+1	+1
18	0	0	+1	-1	-1
23	+1	+1	0	-1	-1
24	-1	-1	0	+1	+1
30	-1	-1	+1	+1	+1
32	0	0	-1	+1	+1
46	+1	+1	0	-1	-1
47	-1	-1	0	+1	+1
51	-1	-1	+1	0	0
58	+1	+1	+1	-1	-1
67	-1	-1	0	+1	+1
71	0	0	+1	-1	-1
74	-1	-1	+1	0	0
81	0	0	+1	0	0
84	+1	+1	-1	-1	-1
86	+1	+1	0	-1	-1
96	+1	+1	0	-1	-1
97	-1	-1	0	+1	+1
100	-1	-1	0	+1	+1
115	+1	+1	0	-1	-1
116	-1	-1	0	+1	+1
127	-1	-1	+1	0	0
139	-1	-1	+1	+1	+1
142	-1	-1	-1	+1	+1
143	-1	-1	+1	0	0
144	-1	-1	+1	+1	+1
146	-1	-1	0	+1	+1
160	-1	-1	0	+1	+1
161	+1	+1	0	-1	-1
163	-1	-1	0	+1	+1
164	+1	+1	0	-1	-1
166	-1	-1	+1	0	0
170	-1	-1	0	0	0
188	+1	+1	-1	-1	-1

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
190	+1	+1	0	-1	-1
193	-1	-1	-1	+1	+1
204	-1	-1	0	+1	+1
211	-1	-1	0	+1	+1
220	-1	-1	0	+1	+1
224	0	0	+1	-1	-1
228	0	0	-1	+1	+1
229	0	0	0	-1	-1
230	-1	-1	0	+1	+1
231	-1	-1	0	+1	+1
238	+1	+1	+1	-1	-1
241	-1	-1	-1	+1	+1
254	-1	-1	+1	-1	-1
258	+1	+1	0	-1	-1
264	-1	-1	0	+1	+1
266	+1	+1	0	-1	-1
267	+1	+1	+1	-1	-1
271	0	0	+1	-1	-1
277	+1	+1	0	-1	-1
278	0	0	+1	-1	-1
280	+1	+1	0	-1	-1
285	0	0	+1	-1	-1
290	-1	-1	-1	+1	+1
295	0	0	+1	-1	-1

APPENDIX VIII

THE S SCALE

S Scale Items

13. Learning should hardly ever be a matter of the students' memorizing content assigned by the teacher so that they can give it back upon demand.

33. On the whole, teachers are justified in believing that the subjects they teach are quite easy, and that anyone can learn them fully with a little positive help.

35. The primary objective of schooling should be to train students to handle their problem of social adjustment.

37. High school students do not have, by themselves, an instinctive appetite for knowledge.

39. The authority of those who teach is often an obstacle to those who want to learn.

48. When introducing a new concept, it should not be necessary for a teacher to repeat it often or present it in several different ways.

53. Teachers should not correct the mistakes made by a student by giving him "right" solutions but rather by giving him guidance in diagnosing his technique of problem solution.

54. Because concentration must be learned and because it should be learned in the school, teachers should assign tasks whose main value is that they require concentration.

56. Students should be told that they can get their school work if they really try.

63. Students should be cautioned to do no more than they are told, to check with the teacher on almost every step.

80. Giving concrete examples of generalizations and abstractions confuses students more often than it helps them.

86. It is a waste of time to allow students to discuss school subjects among themselves.

87. Making the lesson dramatic often results in making the students miss the point of the lesson.

89. Often a good teacher will just sit back and let the students do the work.

93. If the entire content of a subject is taken from one textbook or workbook, there is little likelihood that a majority of students will find the material meaningful or interesting.

94. The only thing worth teaching is a principle.

96. Textbooks should be the primary focus of most of the teaching-learning activity in the classroom.

103. The teacher should be the authority in matters of knowledge as well as in matters of discipline.

118. It often does a student good to have his work criticized in the presence of other students.

121. If one does not like boys and girls, then one cannot be an effective teacher.

123. A teacher need spend only a little time with bright students since they can usually learn by themselves.

126. There is little value in assigning any reading outside of textbooks.

129. Students should not all be encouraged to attack their schoolwork in the same way.

130. The more difficult the task, the better for the student.

132. Differentiation of work among students according to ability does not seem to be a workable idea.

136. Planning by the teacher is a merit in itself since it is impossible to conceive of a bad class being run like clockwork.

141. A good teacher will need review sessions only once or twice a semester.

145. When a pupil has had some practice in planning his work in a subject, it is unnecessary for the teacher to preplan activities in the subject.

149. Teachers should realize that they simply must teach a large number of facts that are unrelated to each other.

152. Students should be forced to think.

162. Not every normal student needs to take English and mathematics.

165. It is undesirable to allow students to do things in a way that is somewhat different from the instructions given them.

170. Students need to be taught how to learn effectively.

172. Effective instruction is difficult to reconcile with concern for the development of student initiative and self-appraisal.

173. As a rule, it is a good idea to speak so slowly that the students can write down your lecture word for word.

175. It is not necessary that students be forced to think.

177. Students should be required to stand when reciting.

179. Most kinds of visual aids are time-wasting, round-about, and burdensome methods of conveying infromation that can be got better by means of the printed word.

182. It is better to let new subject matter stand "on its own feet" than to point out its connections with previously learned material.

183. The best way of prodding students on to study in the future is to ask them questions, preferably written questions.

189. Good teachers are often less competent as critics than poor teachers.

196. A student can often more easily be taught how to think if the solution is given at the beginning of study.

202. The main purpose served by a teacher's asking questions of the students is to discover whether they have done their work.

203. In most subjects, good tests must call for considerable sheer recall of difficult and isolated bits of knowledge.

208. The success of a lesson is directly proportional to how free of dramatics it is.

210. The purpose of teaching science in the secondary school should be to develop mastery of subject matter rather than intellectual curiosity.

213. Preparation for teaching really involves little more than knowing the subject.

214. Letter grades (or marks) are mostly a local community affair, and so the community attitude must be given priority in the establishment of what levels os acheivement are to correspond with which grades or marks.

218. It is often unnecessary to plan lessons.

234. A teacher should never acknowledge her ignorance of a topic in the presence of her students.

235. Teachers should avoid the use of undignified expressions and slang.

236. Probably the best way to get children to learn is through the setting of high standards and the application of insistent pressure.

248. It is desirable that school grades (marks) produce competition among students.

254. In promoting learnings of the skill or practice type, teachers should let students begin with crude "wholes" and then gradually improve the "parts" through practice.

257. It is rediculous that schools should be asked to teach students how to drive, save money, or organize their personal lives.

258. No attempt to "make learning relevant" will bridge the gap between the classroom and the uninterested student.

259. The best way to avoid wasting the powers of a good student is to plan his work for him.

263. Competition should be emphasized in the classroom since it provides motivation for learning.

265. The teacher should question students on facts and let understanding of principles take care of itself.

276. A few survey courses will suffice to prepare a secondary school teacher in "subject matter" and the rest of the preparation should consist of the study of education as such, e.g., child development and teaching methods.

277. One good, long session on a particular learning activity is worth much more than the same amount of time spread out over several sessions.

282. The teacher who has instilled knowledge and skill with subject matter has done the most important part of the job.

284. If some students don't understand what the teacher is saying while most of the students do understand, then it is hardly fair to the class to take time out for questions.

292. Teachers often lose some of their effectiveness because they are so energetic.

297. It is better for teachers to err on the side of underexplaining rather than overexplaining.

300. Interrupting students to correct their grammer is generally desirable.

APPENDIX IX

FREQUENCY TABLES FOR THE SELECTION OF S SCALE ITEMS

These tables contain the following:

1) the EOI item number,

2) the percentage of survivors and nonsurvivors who responded in each response category,

3) the total number of respondents to each item,

4) the chi square computed for each item.
The chi square is based upon a 3x2 contingency table which was derived by combining the two extreme response categories ("strongly disagree" and "strongly agree") with their less extreme complements ("disagree" and "agree"). An asterisk indicates statistical significance ($p < .10$) and inclusion of the item in the scale.

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
1.	Surv	8.0	33.3	9.3	40.0	9.3	75	1.90
	Non	10.2	35.6	3.4	44.1	6.8	59	
2.	Surv	6.7	14.7	17.3	42.7	18.7	75	0.55
	Non	3.3	21.7	20.0	41.7	13.3	60	
3.	Surv	14.5	28.9	14.5	32.9	9.2	76	4.50
	Non	3.3	23.3	23.3	43.3	6.7	60	
4.	Surv	10.5	17.1	13.2	42.1	17.1	76	2.70
	Non	8.3	20.0	23.3	30.0	18.3	60	
5.	Surv	9.2	21.1	22.4	38.2	9.2	76	1.16
	Non	12.1	24.1	15.5	36.2	12.1	58	
6.	Surv	6.6	25.0	22.4	30.3	15.8	76	0.17
	Non	1.7	26.7	23.3	33.3	15.0	60	
7.	Surv	62.0	26.8	1.4	5.6	4.2	71	1.72
	Non	54.4	26.3	3.5	3.5	12.3	57	
8.	Surv	16.0	28.0	16.0	37.3	2.7	75	1.80
	Non	10.7	25.0	12.5	46.4	5.4	56	
9.	Surv	59.5	25.7	5.4	6.8	2.7	74	3.44
	Non	39.0	33.9	6.8	13.6	6.8	59	
10.	Surv	44.0	40.0	6.7	5.3	4.0	75	3.63
	Non	46.7	30.0	3.3	11.7	8.3	60	
11.	Surv	27.4	34.2	16.4	16.4	5.5	73	0.52
	Non	24.1	39.7	12.1	13.8	10.3	58	
12.	Surv	14.7	41.3	28.0	14.7	1.3	75	2.18
	Non	10.5	36.8	26.3	22.8	3.5	57	
13.	Surv	0.0	22.7	14.7	36.0	26.7	75	8.27*
	Non	7.1	39.3	8.9	28.6	16.1	56	
14.	Surv	5.4	29.7	25.7	29.7	9.5	74	3.03
	Non	3.3	18.3	28.3	35.0	15.0	60	
15.	Surv	4.1	31.1	32.4	29.7	2.7	74	0.04
	Non	0.0	33.9	32.2	32.2	1.7	59	
16.	Surv	68.5	20.5	1.4	2.7	6.8	73	1.38
	Non	63.6	18.2	1.8	3.6	12.7	55	
17.	Surv	6.5	15.6	9.1	46.8	22.1	77	1.42
	Non	5.2	12.1	5.2	44.8	32.8	58	
18.	Surv	18.9	36.5	18.9	24.3	1.4	74	1.14
	Non	6.7	40.0	25.0	25.0	3.3	60	
19.	Surv	6.6	15.8	17.1	51.3	9.2	76	0.69
	Non	5.2	17.2	12.1	46.6	19.0	58	
20.	Surv	5.7	28.6	20.0	37.1	8.6	70	0.51
	Non	5.3	35.1	17.5	35.1	7.0	57	
21.	Surv	5.6	30.6	18.1	27.8	18.1	72	0.39
	Non	8.8	28.1	14.0	33.3	15.8	57	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
22.	Surv	14.5	30.4	29.0	24.6	1.4	69	2.64
	Non	11.3	45.3	17.0	20.8	5.7	53	
23.	Surv	45.6	44.1	2.9	5.9	1.5	68	4.60
	Non	36.5	38.5	7.7	5.8	11.5	52	
24.	Surv	8.6	7.1	10.0	35.7	38.6	70	0.86
	Non	7.3	14.5	10.9	30.9	36.4	55	
25.	Surv	5.6	9.9	9.9	43.7	31.0	71	2.60
	Non	10.5	12.3	15.8	28.1	33.3	57	
26.	Surv	5.9	26.5	33.8	22.1	11.8	68	0.75
	Non	1.9	29.6	27.8	31.5	9.3	54	
27.	Surv	10.4	28.4	10.4	31.3	19.4	67	0.44
	Non	7.0	28.1	14.0	38.6	12.3	57	
28.	Surv	3.1	12.3	18.5	43.1	23.1	65	3.62
	Non	5.3	17.5	28.1	28.1	21.1	57	
29.	Surv	7.9	30.2	31.7	23.8	6.3	63	3.86
	Non	2.2	48.9	15.6	24.4	8.9	45	
30.	Surv	8.2	31.1	31.1	23.0	6.6	61	1.33
	Non	16.0	34.0	24.0	14.0	12.0	50	
31.	Surv	3.2	15.9	14.3	42.9	23.8	63	4.13
	Non	2.0	12.2	4.1	55.1	26.5	49	
32.	Surv	3.1	23.4	20.3	46.9	6.2	64	0.57
	Non	5.8	25.0	15.4	42.3	11.5	52	
33.	Surv	18.9	43.4	28.3	7.5	1.9	53	9.77*
	Non	14.9	36.2	14.9	27.7	6.4	47	
34.	Surv	17.9	60.7	8.9	12.5	0.0	56	3.51
	Non	6.8	59.1	6.8	22.7	4.5	44	
35.	Surv	7.3	47.3	30.9	12.7	1.8	55	6.78*
	Non	6.5	32.6	23.9	30.4	6.5	46	
36.	Surv	14.5	36.4	18.2	27.3	3.6	55	3.98
	Non	10.4	31.3	35.4	20.8	2.1	48	
37.	Surv	20.7	46.6	15.5	10.3	6.9	58	6.13*
	Non	21.4	23.8	16.7	33.3	4.8	42	
38.	Surv	5.4	19.6	12.5	48.2	14.3	56	1.56
	Non	2.4	12.2	14.6	58.5	12.2	41	
39.	Surv	6.4	20.5	24.4	42.3	6.4	78	5.14*
	Non	6.7	35.0	11.7	33.3	13.3	60	
40.	Surv	59.0	28.2	3.8	2.6	6.4	78	2.75
	Non	49.2	28.8	3.4	11.9	6.8	59	
41.	Surv	39.7	39.7	7.7	11.5	1.3	78	4.44
	Non	33.3	30.0	13.3	15.0	8.3	60	
42.	Surv	9.1	20.8	11.7	37.7	20.8	77	0.77
	Non	5.0	18.3	11.7	41.7	23.3	60	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
43.	Surv	48.7	33.3	7.7	6.4	3.8	78	3.46
	Non	45.0	31.7	3.3	10.0	10.0	60	
44.	Surv	7.7	7.7	19.2	44.9	20.5	78	0.93
	Non	5.1	15.3	22.0	39.0	18.6	59	
45.	Surv	31.2	36.4	16.9	10.4	5.2	77	4.11
	Non	25.0	31.7	13.3	23.3	6.7	60	
46.	Surv	33.3	46.2	9.0	10.3	1.3	78	2.60
	Non	28.3	41.7	8.3	20.0	1.7	60	
47.	Surv	9.1	37.7	26.0	22.1	5.2	77	1.52
	Non	6.7	31.7	25.0	30.0	6.7	60	
48.	Surv	44.9	39.7	3.8	3.8	7.7	78	6.26*
	Non	28.3	40.0	3.3	16.7	11.7	60	
49.	Surv	27.3	23.4	13.0	29.9	6.5	77	4.12
	Non	20.0	21.7	26.7	15.0	16.7	60	
50.	Surv	6.5	16.9	18.2	44.2	14.3	77	1.18
	Non	10.0	21.7	16.7	36.7	15.0	60	
51.	Surv	2.6	31.2	26.0	32.5	7.8	77	1.45
	Non	3.4	33.9	32.2	28.8	1.7	59	
52.	Surv	6.7	14.7	22.7	37.3	18.7	75	1.41
	Non	3.3	26.7	18.3	43.3	8.3	60	
53.	Surv	5.2	5.2	11.7	57.1	20.8	77	6.17*
	Non	8.6	10.3	1.7	44.8	34.5	58	
54.	Surv	6.6	42.1	26.3	19.7	5.3	76	6.91*
	Non	6.8	22.0	27.1	39.0	5.1	59	
55.	Surv	3.9	31.6	19.7	36.8	7.9	76	1.60
	Non	3.4	22.0	23.7	40.7	10.2	59	
56.	Surv	4.0	14.7	21.3	45.3	14.7	75	6.89*
	Non	0.0	27.1	35.6	32.2	5.1	59	
57.	Surv	33.3	41.3	13.3	9.3	2.7	75	2.65
	Non	22.4	39.7	17.2	12.1	8.6	58	
58.	Surv	5.5	23.3	20.5	38.4	12.3	73	0.93
	Non	3.4	20.3	27.1	30.5	18.6	59	
59.	Surv	6.5	5.2	7.8	33.8	46.8	77	2.19
	Non	11.7	6.7	3.3	40.0	38.3	60	
60.	Surv	23.4	37.7	19.5	15.6	3.9	77	1.72
	Non	19.6	41.1	12.5	21.4	5.4	56	
61.	Surv	4.1	31.1	23.0	29.7	12.2	74	0.13
	Non	8.5	23.7	23.7	28.8	15.3	59	
62.	Surv	4.0	6.7	4.0	52.0	33.3	75	2.57
	Non	12.1	8.6	3.4	37.9	37.9	58	
63.	Surv	62.2	32.4	0.0	0.0	5.4	74	12.00*
	Non	49.1	24.6	5.3	3.5	17.5	57	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
64.	Surv	12.2	23.0	20.3	35.1	9.5	74	1.24
	Non	12.5	14.3	19.6	39.3	14.3	56	
65.	Surv	5.7	7.1	7.1	57.1	22.9	70	3.60
	Non	7.4	14.8	13.0	50.0	14.8	54	
66.	Surv	5.7	24.3	22.9	40.0	7.1	70	0.83
	Non	3.6	27.3	29.1	32.7	7.3	55	
67.	Surv	4.1	20.5	19.2	46.6	9.6	73	0.84
	Non	5.7	26.4	17.0	39.6	11.3	53	
68.	Surv	58.6	31.4	1.4	2.9	5.7	70	3.25
	Non	47.3	34.5	0.0	10.9	7.3	55	
69.	Surv	7.2	7.2	8.7	52.2	24.6	69	3.37
	Non	8.9	17.9	10.7	37.5	25.0	56	
70.	Surv	9.5	4.1	6.8	39.2	40.5	74	0.58
	Non	7.4	7.4	3.7	46.3	35.2	54	
71.	Surv	4.3	31.9	23.2	30.4	10.1	69	1.96
	Non	7.1	35.7	28.6	19.6	8.9	56	
72.	Surv	14.7	35.3	33.8	11.8	4.4	68	3.44
	Non	12.8	23.4	51.1	10.6	2.1	47	
73.	Surv	18.3	45.1	11.3	21.1	4.2	71	0.76
	Non	12.2	44.9	16.3	18.4	8.2	49	
74.	Surv	2.8	32.4	23.9	36.6	4.2	71	0.36
	Non	4.0	36.0	24.0	36.0	0.0	50	
75.	Surv	13.0	27.5	21.7	31.9	5.8	69	1.84
	Non	15.2	23.9	13.0	39.1	8.7	46	
76.	Surv	3.0	7.6	16.7	59.1	13.6	66	3.07
	Non	9.3	13.0	13.0	53.7	11.1	54	
77.	Surv	6.4	6.4	11.5	55.1	20.5	78	2.22
	Non	6.7	15.0	13.3	53.3	11.7	60	
78.	Surv	12.8	44.9	17.9	23.1	1.3	78	0.26
	Non	15.0	38.3	20.0	20.0	6.7	60	
79.	Surv	7.7	24.4	24.4	34.6	9.0	78	0.50
	Non	6.7	30.0	20.0	28.3	15.0	60	
80.	Surv	42.9	42.9	5.2	5.2	3.9	77	5.64*
	Non	26.7	43.3	6.7	15.0	8.3	60	
81.	Surv	3.8	6.4	7.7	52.6	29.5	78	1.52
	Non	5.0	10.0	11.7	51.7	21.7	60	
82.	Surv	11.5	43.6	26.9	17.9	0.0	78	2.13
	Non	16.9	42.4	16.9	22.0	1.7	59	
83.	Surv	9.1	46.8	20.8	19.5	3.9	77	3.08
	Non	6.7	35.0	31.7	20.0	6.7	60	
84.	Surv	3.8	37.2	14.1	35.9	9.0	78	0.55
	Non	8.3	26.7	16.7	38.3	10.0	60	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
85.	Surv	5.1	21.8	7.7	44.9	20.5	78	0.63
	Non	6.7	15.0	6.7	53.3	18.3	60	
86.	Surv	52.6	37.2	3.8	2.6	3.8	78	5.80*
	Non	38.3	38.3	3.3	5.0	15.0	60	
87.	Surv	23.4	53.2	9.1	11.7	2.6	77	5.45*
	Non	10.0	48.3	13.3	23.3	5.0	60	
88.	Surv	6.4	23.1	47.4	20.5	2.6	78	0.96
	Non	11.7	25.0	40.0	23.3	0.0	60	
89.	Surv	14.3	37.7	7.8	35.1	5.2	77	7.32*
	Non	6.7	30.0	23.3	36.7	3.3	60	
90.	Surv	18.2	29.9	27.3	19.5	5.2	77	2.97
	Non	11.7	28.3	21.7	28.3	10.0	60	
91.	Surv	9.1	33.8	23.4	27.3	6.5	77	3.97
	Non	10.0	31.7	11.7	33.3	13.3	60	
92.	Surv	7.7	29.5	19.2	30.8	12.8	78	3.66
	Non	6.7	20.0	13.3	50.0	10.0	60	
93.	Surv	5.1	37.2	25.6	24.4	7.7	78	5.04*
	Non	6.8	22.0	20.3	39.0	11.9	59	
94.	Surv	21.8	60.3	6.4	10.3	1.3	78	4.61*
	Non	16.7	50.0	15.0	16.7	1.7	60	
95.	Surv	7.7	3.8	9.0	32.1	47.4	78	0.90
	Non	10.3	6.9	8.6	43.1	31.0	58	
96.	Surv	15.6	58.4	14.3	11.7	0.0	77	6.00*
	Non	16.9	37.3	22.0	16.9	6.8	59	
97.	Surv	5.2	18.2	26.0	41.6	9.1	77	0.09
	Non	5.1	18.6	23.7	44.1	8.5	59	
98.	Surv	6.5	19.5	27.3	33.8	13.0	77	2.04
	Non	5.1	23.7	16.9	47.5	6.8	59	
99.	Surv	11.5	41.0	28.2	16.7	2.6	78	2.51
	Non	6.8	35.6	27.1	30.5	0.0	59	
100.	Surv	4.1	20.3	17.6	50.0	8.1	74	1.56
	Non	3.3	23.3	10.0	53.3	10.0	60	
101.	Surv	21.1	56.6	5.3	15.8	1.3	76	3.42
	Non	23.3	40.0	10.0	21.7	5.0	60	
102.	Surv	12.2	25.7	36.5	20.3	5.4	74	0.94
	Non	1.8	39.3	28.6	23.2	7.1	56	
103.	Surv	4.2	47.2	25.0	15.3	8.3	72	6.10*
	Non	3.7	33.3	18.5	38.9	5.6	54	
104.	Surv	4.1	35.1	18.9	39.2	2.7	74	0.80
	Non	3.4	35.6	13.6	40.7	6.8	59	
105.	Surv	5.3	5.3	1.3	34.7	53.3	75	2.35
	Non	11.7	6.7	0.0	48.3	33.3	60	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
106.	Surv	2.8	16.7	16.7	52.8	11.1	72	0.36
	Non	3.4	16.9	20.3	44.1	15.3	59	
107.	Surv	6.8	33.8	17.6	36.5	5.4	74	1.33
	Non	0.0	32.1	16.1	39.3	12.5	56	
108.	Surv	30.6	56.9	5.6	5.6	1.4	72	4.33
	Non	28.8	44.2	9.6	11.5	5.8	52	
109.	Surv	7.0	14.1	35.2	35.2	8.5	71	2.64
	Non	11.1	22.2	25.9	35.2	5.6	54	
110.	Surv	2.7	45.2	28.8	19.2	4.1	73	0.90
	Non	7.1	46.4	21.4	19.6	5.4	56	
111.	Surv	15.3	61.1	9.7	12.5	1.4	72	3.65
	Non	14.3	46.4	16.1	17.9	5.4	56	
112.	Surv	6.2	34.4	31.3	21.9	6.2	64	1.06
	Non	3.8	34.6	25.0	34.6	1.9	52	
113.	Surv	7.0	36.6	18.3	38.0	0.0	71	2.15
	Non	5.5	25.5	21.8	41.8	5.5	55	
114.	Surv	6.4	28.2	23.1	41.0	1.3	78	0.07
	Non	3.3	30.0	25.0	40.0	1.7	60	
115.	Surv	17.9	47.4	15.4	17.9	1.3	78	3.24
	Non	10.0	41.7	16.7	28.3	3.3	60	
116.	Surv	2.6	16.7	32.1	39.7	9.0	78	0.61
	Non	11.7	11.7	26.7	45.0	5.0	60	
117.	Surv	9.0	42.3	21.8	25.6	1.3	78	0.90
	Non	10.0	33.3	26.7	21.7	8.3	60	
118.	Surv	14.1	46.2	29.5	7.7	2.6	78	11.49*
	Non	18.3	30.0	18.3	31.7	1.7	60	
119.	Surv	6.4	16.7	41.0	32.1	3.8	78	0.57
	Non	1.7	25.0	43.3	25.0	5.0	60	
120.	Surv	5.1	19.2	28.2	37.2	10.3	78	2.02
	Non	1.7	33.3	21.7	31.7	11.7	60	
121.	Surv	3.8	6.4	6.4	43.6	39.7	78	5.65*
	Non	10.0	15.0	3.3	40.0	31.7	60	
122.	Surv	6.4	34.6	28.2	25.6	5.1	78	0.20
	Non	8.3	33.3	25.0	25.0	8.3	60	
123.	Surv	20.5	64.1	7.7	6.4	1.3	78	9.39*
	Non	16.7	48.3	8.3	21.7	5.0	60	
124.	Surv	13.0	28.6	14.3	29.9	14.3	77	3.28
	Non	8.3	21.7	25.0	31.7	13.3	60	
125.	Surv	5.1	15.4	12.8	53.8	12.8	78	1.58
	Non	10.0	15.0	6.7	51.7	16.7	60	
126.	Surv	53.8	38.5	1.3	3.8	2.6	78	6.95*
	Non	44.1	32.2	3.4	8.5	11.9	59	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X^2
127.	Surv	3.8	10.3	7.7	57.7	20.5	78	3.16
	Non	8.3	16.7	10.0	40.0	25.0	60	
128.	Surv	3.8	10.3	12.8	52.6	20.5	78	0.70
	Non	3.3	15.0	15.0	53.3	13.3	60	
129.	Surv	3.8	3.8	16.7	62.8	12.8	78	5.05*
	Non	6.9	13.8	12.1	51.7	15.5	58	
130.	Surv	9.1	62.3	19.5	9.1	0.0	77	9.42*
	Non	5.0	41.7	30.0	20.0	3.3	60	
131.	Surv	5.1	5.1	9.0	55.1	25.6	78	0.71
	Non	10.0	5.0	8.3	45.0	31.7	60	
132.	Surv	15.4	57.7	17.9	9.0	0.0	78	7.27*
	Non	18.6	32.2	30.5	15.3	3.4	59	
133.	Surv	6.5	33.8	19.5	33.8	6.5	77	0.40
	Non	13.3	30.0	21.7	25.0	10.0	60	
134.	Surv	42.1	46.1	1.3	7.9	2.6	76	2.61
	Non	30.5	47.5	3.4	11.9	6.8	59	
135.	Surv	15.4	52.6	12.8	16.7	2.6	78	1.26
	Non	13.6	45.8	18.6	15.3	6.8	59	
136.	Surv	21.8	47.4	15.4	14.1	1.3	78	11.83*
	Non	11.7	28.3	28.3	21.7	10.0	60	
137.	Surv	9.1	20.8	13.0	53.2	3.9	77	2.81
	Non	3.3	16.7	21.7	51.7	6.7	60	
138.	Surv	4.0	10.7	21.3	56.0	8.0	75	1.51
	Non	1.7	17.2	27.6	41.4	12.1	58	
139.	Surv	3.9	31.6	35.5	22.4	6.6	76	0.51
	Non	1.7	33.9	30.5	33.9	0.0	59	
140.	Surv	3.9	11.7	14.3	58.4	11.7	77	3.63
	Non	3.4	20.3	22.0	44.1	10.2	59	
141.	Surv	17.1	59.2	14.5	7.9	1.3	76	10.20*
	Non	20.3	35.6	13.6	23.7	6.8	59	
142.	Surv	3.9	18.2	24.7	46.8	6.5	77	2.09
	Non	6.8	22.0	15.3	44.1	11.9	59	
143.	Surv	3.9	13.2	27.6	50.0	5.3	76	0.29
	Non	0.0	16.9	23.7	45.8	13.6	59	
144.	Surv	4.1	21.6	14.9	56.8	2.7	74	0.23
	Non	3.5	24.6	12.3	50.9	8.8	57	
145.	Surv	14.7	68.0	10.7	5.3	1.3	75	7.05*
	Non	14.3	48.2	19.6	16.1	1.8	56	
146.	Surv	4.1	10.8	20.3	56.8	8.1	74	3.34
	Non	3.3	23.3	13.3	51.7	8.3	60	
147.	Surv	7.1	12.9	35.7	41.4	2.9	70	2.81
	Non	7.4	16.7	46.3	22.2	7.4	54	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	X^2
148.	Surv	12.0	44.0	20.0	20.0	4.0	75	1.22
	Non	11.8	35.3	27.5	25.5	0.0	51	
149.	Surv	35.1	50.0	9.5	5.4	0.0	74	13.62*
	Non	25.4	37.3	8.5	20.3	8.5	59	
150.	Surv	5.5	6.8	6.8	42.5	38.4	73	2.48
	Non	12.1	8.6	10.3	39.7	29.3	58	
151.	Surv	8.0	42.7	18.7	26.7	4.0	75	1.43
	Non	8.6	32.8	25.9	22.4	10.3	58	
152.	Surv	5.2	14.3	11.7	49.4	19.5	77	6.77*
	Non	3.5	33.3	3.5	42.1	17.5	57	
153.	Surv	9.3	36.0	46.7	5.3	2.7	75	3.59
	Non	6.9	31.0	43.1	17.2	1.7	58	
154.	Surv	16.0	49.3	20.0	13.3	1.3	75	3.72
	Non	8.6	43.1	20.7	24.1	3.4	58	
155.	Surv	4.1	33.8	24.3	35.1	2.7	74	2.56
	Non	0.0	25.4	25.4	44.1	5.1	59	
156.	Surv	12.3	47.9	11.0	24.7	4.1	73	0.65
	Non	15.0	38.3	13.3	31.7	1.7	60	
157.	Surv	2.7	24.0	20.0	45.3	8.0	75	0.29
	Non	3.4	27.1	20.3	44.1	5.1	59	
158.	Surv	2.6	29.9	26.0	40.3	1.3	77	1.68
	Non	1.7	32.2	16.9	47.5	1.7	59	
159.	Surv	5.5	37.0	27.4	27.4	2.7	73	0.08
	Non	5.0	35.0	28.3	28.3	3.3	60	
160.	Surv	8.1	21.6	10.8	52.7	6.8	74	2.15
	Non	3.4	15.5	10.3	63.8	6.9	58	
161.	Surv	7.9	50.0	19.7	22.4	0.0	76	1.80
	Non	11.3	35.8	20.8	26.4	5.7	53	
162.	Surv	23.9	52.1	14.1	7.0	2.8	71	4.97*
	Non	21.8	38.2	16.4	18.2	5.5	55	
163.	Surv	8.0	28.0	18.7	38.7	6.7	75	1.13
	Non	3.4	40.7	13.6	30.5	11.9	59	
164.	Surv	17.1	51.4	14.3	14.3	2.9	70	2.69
	Non	15.8	38.6	21.1	22.8	1.8	57	
165.	Surv	14.9	56.8	13.5	14.9	0.0	74	6.62*
	Non	7.1	50.0	8.9	26.8	7.1	56	
166.	Surv	15.5	21.1	23.9	38.0	1.4	71	2.58
	Non	12.0	24.0	36.0	24.0	4.0	50	
167.	Surv	30.4	52.2	2.9	13.0	1.4	69	1.10
	Non	26.4	49.1	5.7	15.1	3.8	53	
168.	Surv	6.8	5.5	16.4	49.3	21.9	73	3.71
	Non	7.3	18.2	12.7	38.2	23.6	55	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
169.	Surv	12.7	35.2	9.9	33.8	8.5	71	3.39
	Non	10.7	28.6	21.4	33.9	5.4	56	
170.	Surv	4.3	4.3	1.4	51.4	38.6	70	5.07*
	Non	5.6	11.1	7.4	53.7	22.2	54	
171.	Surv	57.8	29.7	3.1	3.1	6.2	64	2.44
	Non	48.1	30.8	1.9	7.7	11.5	52	
172.	Surv	26.6	51.6	15.6	3.1	3.1	64	4.74*
	Non	19.6	47.1	13.7	13.7	5.9	51	
173.	Surv	55.7	32.8	3.3	3.3	4.9	61	6.14*
	Non	42.6	34.0	0.0	10.6	12.8	47	
174.	Surv	2.9	19.1	25.0	44.1	8.8	68	0.12
	Non	6.0	14.0	24.0	54.0	2.0	50	
175.	Surv	36.1	44.3	9.8	4.9	4.9	61	4.59*
	Non	15.2	47.8	13.0	17.4	6.5	46	
176.	Surv	32.3	38.5	9.2	13.8	6.2	65	2.04
	Non	31.3	35.4	4.2	22.9	6.2	48	
177.	Surv	36.1	47.5	3.3	9.8	3.3	61	7.15*
	Non	30.0	34.0	16.0	12.0	8.0	50	
178.	Surv	15.9	44.4	20.6	15.9	3.2	63	2.74
	Non	4.1	46.9	16.3	28.6	4.1	49	
179.	Surv	66.0	28.3	1.9	1.9	1.9	53	8.95*
	Non	36.6	36.6	2.4	17.1	7.3	41	
180.	Surv	30.4	44.6	12.5	8.9	3.6	56	2.99
	Non	17.8	42.2	24.4	11.1	4.4	45	
181.	Surv	1.7	13.8	19.0	56.9	8.6	58	0.78
	Non	6.7	13.3	13.3	51.1	15.6	45	
182.	Surv	36.8	52.6	1.8	3.5	5.3	57	5.26*
	Non	31.8	40.9	9.1	9.1	9.1	44	
183.	Surv	7.4	35.2	42.6	14.8	0.0	54	6.12*
	Non	0.0	-21.4	47.6	28.6	2.4	42	
184.	Surv	5.7	43.4	30.2	20.8	0.0	53	1.48
	Non	5.9	35.3	26.5	23.5	8.8	34	
185.	Surv	16.7	55.0	15.0	10.0	3.3	60	0.95
	Non	12.8	51.3	15.4	12.8	7.7	39	
186.	Surv	5.4	32.1	19.6	42.9	0.0	56	0.13
	Non	4.7	30.2	18.6	44.2	2.3	43	
187.	Surv	7.5	15.1	20.8	54.7	1.9	53	0.29
	Non	4.5	22.7	20.5	45.5	6.8	44	
188.	Surv	17.4	52.2	17.4	13.0	0.0	46	2.19
	Non	7.3	48.8	19.5	17.1	7.3	41	
189.	Surv	17.9	48.7	24.4	7.7	1.3	78	6.75*
	Non	8.5	37.3	33.9	20.3	0.0	59	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
190.	Surv	10.3	34.6	26.9	25.6	2.6	78	1.39
	Non	1.7	45.8	18.6	32.2	1.7	59	
191.	Surv	6.4	7.7	6.4	57.7	21.8	78	1.62
	Non	3.4	13.6	11.9	62.7	8.5	59	
192.	Surv	5.1	5.1	3.8	55.1	30.8	78	0.95
	Non	8.3	5.0	6.7	56.7	23.3	60	
193.	Surv	6.4	3.8	10.3	60.3	19.2	78	1.34
	Non	8.5	8.5	10.2	50.8	22.0	59	
194.	Surv	3.9	43.4	32.9	18.4	1.3	76	2.26
	Non	6.7	28.3	43.3	18.3	3.3	60	
195.	Surv	9.0	38.5	11.5	24.4	16.7	78	0.76
	Non	3.3	36.7	13.3	38.3	8.3	60	
196.	Surv	11.5	57.7	19.2	10.3	1.3	78	6.64*
	Non	15.3	32.2	32.2	18.6	1.7	59	
197.	Surv	1.3	45.5	27.3	24.7	1.3	77	0.20
	Non	1.7	48.3	24.1	24.1	1.7	58	
198.	Surv	2.6	20.8	33.8	37.7	5.2	77	0.55
	Non	3.3	23.3	36.7	31.7	5.0	60	
199.	Surv	19.2	55.1	15.4	6.4	3.8	78	1.89
	Non	25.0	41.7	15.0	13.3	5.0	60	
200.	Surv	7.7	39.7	17.9	28.2	6.4	78	1.32
	Non	6.7	31.7	18.3	36.7	6.7	60	
201.	Surv	15.8	39.5	13.2	26.3	5.3	76	2.12
	Non	16.9	35.6	6.8	30.5	10.2	59	
202.	Surv	23.7	60.5	3.9	10.5	1.3	76	5.82*
	Non	20.0	46.7	10.0	16.7	6.7	60	
203.	Surv	54.5	33.8	5.2	3.9	2.6	77	4.78*
	Non	37.3	39.0	5.1	10.2	8.5	59	
204.	Surv	11.1	15.3	22.2	41.7	9.7	72	0.42
	Non	5.3	26.3	21.1	36.8	10.5	57	
205.	Surv	2.7	8.0	9.3	50.7	29.3	75	1.84
	Non	5.2	13.8	8.6	48.3	24.1	58	
206.	Surv	3.9	5.2	10.4	63.6	16.9	77	2.94
	Non	3.5	14.0	5.3	52.6	24.6	57	
207.	Surv	8.2	24.7	27.4	32.9	6.8	73	0.99
	Non	3.6	21.4	32.1	32.1	10.7	56	
208.	Surv	15.1	68.5	11.0	5.5	0.0	73	11.51*
	Non	6.8	50.8	22.0	15.3	5.1	59	
209.	Surv	15.7	51.4	15.7	15.7	1.4	70	1.15
	Non	18.2	40.0	21.8	16.4	3.6	55	
210.	Surv	30.6	54.2	11.1	1.4	2.8	72	6.56*
	Non	15.8	59.6	7.0	10.5	7.0	57	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
211.	Surv	4.1	6.8	6.8	50.0	32.4	74	2.05
	Non	5.4	14.3	7.1	41.1	32.1	56	
212.	Surv	4.3	24.3	30.0	30.0	11.4	70	2.26
	Non	3.6	16.4	25.5	45.5	9.1	55	
213.	Surv	51.4	40.3	1.4	4.2	2.8	72	6.58*
	Non	29.2	40.0	0.0	14.5	7.3	55	
214.	Surv	33.8	45.9	14.9	5.4	0.0	74	7.05*
	Non	16.4	41.8	30.9	9.1	1.8	55	
215.	Surv	4.1	16.2	35.1	40.5	4.1	74	0.34
	Non	4.1	20.4	34.7	32.7	8.2	49	
216.	Surv	5.7	14.3	25.7	41.4	12.9	70	0.85
	Non	4.1	22.4	26.5	42.9	4.1	49	
217.	Surv	6.1	25.8	24.2	37.9	6.1	66	3.26
	Non	2.0	31.4	37.3	25.5	3.9	51	
218.	Surv	26.0	61.6	6.8	2.7	2.7	73	7.43*
	Non	22.4	55.1	2.0	18.4	2.0	49	
219.	Surv	6.0	29.9	37.3	26.9	0.0	67	4.31
	Non	0.0	22.0	56.0	20.0	2.0	50	
220.	Surv	10.4	31.3	20.9	32.8	4.5	67	0.34
	Non	2.0	40.8	24.5	28.6	4.1	49	
221.	Surv	3.2	12.7	17.5	58.7	7.9	63	2.55
	Non	2.2	23.9	21.7	41.3	10.9	46	
222.	Surv	5.8	8.7	13.0	60.9	11.6	69	2.47
	Non	2.3	22.7	15.9	50.0	9.1	44	
223.	Surv	14.1	28.1	25.0	31.3	1.6	64	0.27
	Non	4.2	35.4	22.9	35.4	2.1	48	
224.	Surv	7.8	42.2	20.3	29.7	0.0	64	0.94
	Non	6.8	36.4	18.2	36.4	2.3	44	
225.	Surv	13.8	58.6	12.1	13.8	1.7	58	2.52
	Non	8.7	54.3	23.9	8.7	4.3	46	
226.	Surv	30.8	50.8	10.8	7.7	0.0	65	1.47
	Non	27.1	50.0	8.3	12.5	2.1	48	
227.	Surv	23.1	56.4	9.0	7.7	3.8	78	3.62
	Non	25.9	39.7	12.1	17.2	5.2	58	
228.	Surv	2.6	21.8	11.5	55.1	9.0	78	1.61
	Non	1.7	32.2	8.5	52.5	5.1	59	
229.	Surv	33.3	50.0	5.1	6.4	5.1	78	2.77
	Non	15.3	57.6	5.1	15.3	6.8	59	
230.	Surv	5.1	9.0	3.8	38.5	43.6	78	3.07
	Non	8.5	11.9	0.0	44.1	35.6	59	
231.	Surv	5.1	7.7	9.0	55.1	23.1	78	1.58
	Non	6.8	13.6	10.2	57.6	11.9	59	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
232.	Surv	6.4	26.9	37.2	25.6	3.8	78	3.64
	Non	6.8	35.6	22.0	32.2	3.4	59	
233.	Surv	10.3	55.1	19.2	15.4	0.0	78	3.02
	Non	10.3	41.4	31.0	13.8	3.4	58	
234.	Surv	21.8	56.4	11.5	7.7	2.6	78	6.70*
	Non	25.4	47.5	3.4	23.7	0.0	59	
235.	Surv	3.8	28.2	28.2	29.5	10.3	78	5.19*
	Non	1.7	36.2	12.1	37.9	12.1	58	
236.	Surv	10.3	52.6	29.5	7.7	0.0	78	16.77*
	Non	6.8	33.9	23.7	35.6	0.0	59	
237.	Surv	14.1	48.7	15.4	16.7	5.1	78	3.01
	Non	6.9	41.4	19.0	27.6	5.2	58	
238.	Surv	10.3	50.0	16.7	23.1	0.0	78	2.15
	Non	3.4	48.3	13.8	29.3	5.2	58	
239.	Surv	3.8	12.8	14.1	46.2	23.1	78	0.23
	Non	1.7	12.1	13.8	44.8	27.6	58	
240.	Surv	26.0	61.0	5.2	7.8	0.0	77	1.47
	Non	23.2	57.1	5.4	10.7	3.6	56	
241.	Surv	6.5	20.8	32.5	33.8	6.5	77	2.02
	Non	5.2	13.8	43.1	31.0	6.9	58	
242.	Surv	7.9	63.2	17.1	10.5	1.3	76	0.92
	Non	3.5	61.4	17.5	14.0	3.5	57	
243.	Surv	29.3	53.3	8.0	4.0	5.3	75	2.47
	Non	20.3	54.2	6.8	10.2	8.5	59	
244.	Surv	5.2	6.5	32.5	50.6	5.2	77	1.13
	Non	0.0	17.2	34.5	36.2	12.1	58	
245.	Surv	15.6	49.4	15.6	14.3	5.2	77	0.44
	Non	10.9	50.9	20.0	16.4	1.8	55	
246.	Surv	56.6	32.9	1.3	3.9	5.3	76	3.25
	Non	44.1	37.3	0.0	6.8	11.9	59	
247.	Surv	11.8	36.8	19.7	23.7	7.9	76	2.74
	Non	3.4	32.8	19.0	34.5	10.3	58	
248.	Surv	9.5	51.4	21.6	17.6	0.0	74	9.02*
	Non	8.6	25.9	36.2	25.9	3.4	58	
249.	Surv	9.1	23.4	22.1	33.8	11.7	77	0.17
	Non	7.1	25.0	25.0	41.1	1.8	56	
250.	Surv	10.8	60.8	18.9	6.8	2.7	74	1.66
	Non	15.3	50.8	16.9	8.5	8.5	59	
251.	Surv	3.9	9.2	13.2	59.2	14.5	76	1.65
	Non	0.0	16.9	6.8	67.8	8.5	59	
252.	Surv	2.7	17.3	18.7	45.3	16.0	75	0.62
	Non	7.4	13.0	24.1	42.6	13.0	54	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
253.	Surv	15.9	43.5	18.8	18.8	2.9	69	0.37
	Non	9.3	51.9	14.8	24.1	0.0	54	
254.	Surv	6.8	20.5	50.7	17.8	4.1	73	4.67*
	Non	5.4	14.3	41.1	39.3	0.0	56	
255.	Surv	7.0	29.6	12.7	43.7	7.0	71	4.54
	Non	5.7	15.1	22.6	52.8	3.8	53	
256.	Surv	15.5	45.1	22.5	16.9	0.0	71	0.19
	Non	8.0	50.0	22.0	14.0	6.0	50	
257.	Surv	38.9	45.8	9.7	2.8	2.8	72	12.32*
	Non	28.3	49.1	0.0	11.3	11.3	53	
258.	Surv	44.1	45.6	4.4	2.9	2.9	68	8.58*
	Non	26.4	45.3	3.8	13.2	11.3	53	
259.	Surv	21.4	61.4	10.0	2.9	4.3	70	7.98*
	Non	23.1	38.5	15.4	15.4	7.7	52	
260.	Surv	14.7	38.2	27.9	13.2	5.9	68	0.56
	Non	15.1	35.8	24.5	22.6	1.9	53	
261.	Surv	6.9	15.3	13.9	56.9	6.9	72	1.22
	Non	2.0	28.6	10.2	49.0	10.2	49	
262.	Surv	4.4	14.7	17.6	54.4	8.8	68	2.96
	Non	2.1	12.5	31.3	52.1	2.1	48	
263.	Surv	8.8	39.7	32.4	19.1	0.0	68	5.47*
	Non	6.0	22.0	40.0	30.0	2.0	50	
264.	Surv	6.4	6.4	9.0	48.7	29.5	78	0.61
	Non	6.8	10.2	6.8	44.1	32.2	59	
265.	Surv	42.3	51.3	1.3	2.6	2.6	78	6.39*
	Non	33.9	45.8	1.7	8.5	10.2	59	
266.	Surv	21.8	50.0	10.3	14.1	3.8	78	1.03
	Non	20.7	43.1	12.1	15.5	8.6	58	
267.	Surv	6.4	52.6	19.2	17.9	3.8	78	1.88
	Non	6.8	44.1	16.9	28.8	3.4	59	
268.	Surv	1.3	19.2	14.1	51.3	14.1	78	2.06
	Non	1.7	24.1	20.7	34.5	19.0	58	
269.	Surv	5.1	33.3	37.2	19.2	5.1	78	1.08
	Non	3.4	39.0	28.8	25.4	3.4	59	
270.	Surv	3.8	28.2	39.7	24.4	3.8	78	0.10
	Non	1.7	28.8	42.4	25.4	1.7	59	
271.	Surv	11.5	39.7	28.2	17.9	2.6	78	1.34
	Non	6.9	34.5	32.8	19.0	6.9	58	
272.	Surv	10.4	39.0	23.4	26.0	1.3	77	0.02
	Non	5.2	44.8	22.4	25.9	1.7	58	
273.	Surv	14.3	59.7	13.0	13.0	0.0	77	1.68
	Non	11.9	52.5	15.3	15.3	5.1	59	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
274.	Surv	5.1	21.8	10.3	50.0	12.8	78	0.80
	Non	10.2	22.0	6.8	50.8	10.2	59	
275.	Surv	16.7	39.7	28.2	15.4	0.0	78	4.18
	Non	13.6	28.8	28.8	27.1	1.7	59	
276.	Surv	32.1	47.4	11.5	5.1	3.8	78	5.96*
	Non	26.3	45.6	5.3	14.0	8.8	57	
277.	Surv	30.8	48.7	15.4	3.8	1.3	78	12.29*
	Non	12.1	46.6	15.5	17.2	8.6	58	
278.	Surv	12.8	46.2	23.1	16.7	1.3	78	3.21
	Non	8.6	39.7	20.7	25.9	5.2	58	
279.	Surv	7.7	11.5	24.4	39.7	16.7	78	0.08
	Non	8.6	10.3	22.4	39.7	19.0	58	
280.	Surv	32.1	55.1	3.8	6.4	2.6	78	3.61
	Non	23.7	50.8	6.8	11.9	6.8	59	
281.	Surv	3.8	3.8	2.6	65.4	24.4	78	3.09
	Non	6.9	10.3	3.4	55.2	24.1	58	
282.	Surv	6.6	28.9	27.6	34.2	2.6	76	6.20*
	Non	6.9	22.4	13.8	50.0	6.9	58	
283.	Surv	2.6	14.5	35.5	39.5	7.9	76	2.18
	Non	5.4	19.6	25.0	37.5	12.5	56	
284.	Surv	16.9	59.7	15.6	7.8	0.0	77	11.04*
	Non	5.4	46.4	21.4	26.8	0.0	56	
285.	Surv	7.7	33.3	26.9	30.8	1.3	78	0.92
	Non	5.4	28.6	26.8	35.7	3.6	56	
286.	Surv	3.9	35.5	23.7	36.8	0.0	76	0.88
	Non	3.5	28.1	26.3	40.4	1.8	57	
287.	Surv	35.1	54.5	3.9	2.6	3.9	77	4.02
	Non	35.1	43.9	3.5	12.3	5.3	57	
288.	Surv	40.0	49.3	4.0	4.0	2.7	75	4.32
	Non	21.4	58.9	1.8	12.5	5.4	56	
289.	Surv	13.2	35.5	34.2	15.8	1.3	76	1.43
	Non	10.9	27.3	41.8	14.5	5.5	55	
290.	Surv	3.8	9.0	21.8	57.7	7.7	78	2.39
	Non	5.3	17.5	21.1	50.9	5.3	57	
291.	Surv	4.0	36.0	26.7	28.0	5.3	75	0.57
	Non	7.0	36.8	21.1	28.1	7.0	57	
292.	Surv	17.6	58.1	12.2	12.2	0.0	74	7.68*
	Non	15.4	36.5	23.1	21.2	3.8	52	
293.	Surv	5.3	6.7	9.3	56.0	22.7	75	1.51
	Non	3.7	14.8	5.6	59.3	16.7	54	
294.	Surv	10.4	26.9	37.3	20.9	4.5	67	2.68
	Non	8.5	22.0	30.5	35.6	3.4	59	

Item		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	N	χ^2
295.	Surv	14.7	66.7	10.7	6.7	1.3	75	3.63
	Non	11.5	61.5	7.7	17.3	1.9	52	
296.	Surv	5.2	5.2	7.8	63.6	18.2	77	2.31
	Non	5.3	14.0	5.3	63.2	12.3	57	
297.	Surv	24.7	56.2	11.0	6.8	1.4	73	8.56*
	Non	7.4	51.9	14.8	22.2	3.7	54	
298.	Surv	17.1	42.9	27.1	11.4	1.4	70	1.98
	Non	7.4	48.1	22.2	18.5	3.7	54	
299.	Surv	15.3	59.7	12.5	12.5	0.0	72	4.28
	Non	8.2	49.0	20.4	22.4	0.0	49	
300.	Surv	14.1	49.3	25.4	11.3	0.0	71	6.83*
	Non	12.5	48.2	12.5	25.0	1.8	56	
	Surv							
	Non							
	Surv							
	Non							
	Surv							
	Non							
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	Non							
	Surv							
	Non							
	Surv							
	Non							
	Surv							
	Non							
	Surv							
	Non							

APPENDIX X

SCORING KEY FOR THE S SCALE

194

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
13	-1	-1	0	+1	+1
33	+1	+1	+1	-1	-1
35	+1	+1	0	-1	-1
37	-1	-1	-1	-1	-1
39	+1	+1	+1	0	0
48	+1	+1	0	-1	-1
53	0	0	+1	0	0
54	+1	+1	0	-1	-1
56	0	0	-1	+1	+1
63	+1	+1	0	-1	-1
80	+1	+1	0	-1	-1
86	+1	+1	0	-1	-1
87	+1	+1	0	-1	-1
89	+1	+1	0	-1	-1
93	+1	+1	-1	0	0
94	+1	+1	0	-1	-1
96	+1	+1	0	-1	-1
103	+1	+1	0	-1	-1
118	+1	+1	+1	-1	-1
121	-1	-1	0	+1	+1
123	+1	+1	0	-1	-1
126	+1	+1	0	-1	-1
129	-1	-1	0	+1	+1
130	+1	+1	-1	-1	-1
132	+1	+1	-1	-1	-1
136	+1	+1	0	-1	-1
141	+1	+1	0	-1	-1
145	+1	+1	0	-1	-1
149	+1	+1	0	-1	-1
152	+1	+1	0	-1	-1
162	+1	+1	0	-1	-1
165	+1	+1	0	-1	-1
170	0	0	0	+1	+1
172	+1	+1	0	-1	-1
173	+1	+1	0	-1	-1
175	+1	+1	-1	0	0
177	+1	+1	0	-1	-1
179	+1	+1	0	-1	-1

195

Item	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
182	+1	+1	0	-1	-1
183	+1	+1	0	-1	-1
189	+1	+1	-1	0	0
196	+1	+1	0	-1	-1
202	+1	+1	0	-1	-1
203	+1	+1	-1	0	0
208	+1	+1	0	-1	-1
210	0	0	0	+1	+1
213	+1	+1	0	-1	-1
214	+1	+1	-1	0	0
218	+1	+1	0	-1	-1
234	0	0	0	+1	+1
235	+1	+1	0	-1	-1
236	+1	+1	-1	0	0
248	+1	+1	0	-1	-1
254	0	0	0	+1	+1
257	+1	+1	0	-1	-1
258	+1	+1	0	-1	-1
259	+1	+1	0	-1	-1
263	+1	+1	0	-1	-1
265	+1	+1	0	-1	-1
276	0	0	0	+1	+1
277	+1	+1	0	-1	-1
282	0	0	+1	0	0
284	+1	+1	0	-1	-1
292	+1	+1	-1	0	0
297	+1	+1	0	-1	-1
300	0	0	+1	-1	-1